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# Online Courier Service

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*Dakota State University*

# ONLINE COURIER SERVICE

A graduate project submitted to Dakota State University in partial fulfillment of the requirements for the degree of

Master of Science

in

Information Systems

August, 2011

By
Divya Vemula

Project Committee:

Stephen Krebsbach
Shan Ronghua
Moran Mark

DAKOTA STATE UNIVERSITY

# MSIS Project
# Plan Approval Form
## *(Form #2)*

**Important: Your project plan must be reviewed and approved by your project supervisor before you can register for the implementation course. (See Project Guidelines on grad office website - current students link for detailed description of requirements)**

Student Name: Divya Vemula Expected Graduation Date: May 2011

Committee:

Faculty Project Supervisor: Stephen Krebsbach

Committee member: Mark Moran

Committee member: Ronghua Shan

**Master's Project Title:** Online Courier Service

**Description of Project:** 100-word summary of your formal plan. You may attach additional pages to this form. The signed approval form with additional pages should be attached as first page of your formal plan. Be sure to include:

1. Introduction (very brief overview of what you proposing to do and why you are doing it.)
2. Statement of problem or question you have identified and brief summary of current situation (literature search)
3. Goals, objectives, purpose (what you plan to achieve - desired outcome of this project)
4. Scope of Work, Plan of Action, Activities (how you plan to achieve the objectives, the specific activities you will undertake)
5. Work Breakdown Structure (WBS) and Gantt Chart.
6. Deliverables (what you will actually have once you have completed your project, e.g., a database, a website, a program, etc.)

DO NOT WRITE THE DESCRIPTION HERE. ATTACH WORD-PROCESSED DOCUMENT

*Students must bring the original form to the Office of Graduate Studies and Research.*
*You should retain a copy for your files.*

Approvals/Signatures:

Student: Divya Vemula Date: January 2011

Faculty supervisor: *Stephen Krebsbach* Date: 1-11-11

Committee member: Mark Moran Date: 1/14/2011

Committee member: Ronghua Shan Date: 1-14-11

Original to Office of Graduate Studies and Research

# ABSTRACT

ABSTRACT

**Project title: Online Courier Service**

The main objective of this application is to make courier branch offices located at several places as Online. It is helpful to identify where a particular courier is at particular time and make decision quickly if delay occurs i.e nothing but tracking service. It also makes the work very easy in branch offices to transfer information to other offices or administrator. Customer can also find the status of the courier through Online. Administrator can use the service for the recruitment of franchises through Online. Administrator can perform several activities like recruiting franchises, updating the information. Information about Transportation, branch offices, employees, customers, types of couriers, franchises etc., are available for the administrator who can manage all the information.

Branch officers can perform several activities like updating information about courier delivery status reports, make courier bookings. Information about the employees working in a branch office, information about nearby franchises is also available for branch officers.

Customers can find the status of the courier through Online. Information about shipment details is also available for the customer.

# DECLARATION

I hereby certify that this project constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions or writings of another.

I declare that the project describes original work that has not previously been presented for the award of any other degree of any institution.

Signed,

Divya Vemula.

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# LIST OF FIGURES

# INTRODUCTION

## Introduction to the project

Internet is the technology that makes everything around the world accessible from a single place.

With advancement in the technology and increased access for the internet everywhere, online services, shopping, etc. became more popular these days. Online courier service is an example of one of the service that is carried out over the internet offering wide range of benefits in the field of courier delivery.

Online courier service helps various courier offices manage their day to day courier related activities among various offices very easily and fast. Online courier service provides various courier related services for the customer, administrator employers and franchisers. This project offers services ranging from providing online tracking service for the customers, provide delay notifications to the employer, help administrator in managing the franchise application online, manage the employees and various offices located at various locations.

Courier services help customers easily manage their day to day packages as well as important packages online, where they can easily tack the shipment of the package. Sender of the package through online courier service can track every step of their shipment process using an tracking id which is unique for each customer. Even receiver who to whom package is couriered can also track the shipment if given with tracking associated with the shipment. Online courier service provides the advantage of reduction in paper wastage caused with manual system where, everything is recorded on a paper and which has ambiguity to make decisions. With this online courier service project all the employees at various locations of the courier service can access the system online where, at each point between the sources to

destination whenever a shipment arrives shipment arrival can be recorded over the system such that it reflects across entire record of that particular shipment.

**Back ground of the Project:**

Online courier service is the system that is intended to be developed here. The main reason for the development of this project is to replace a manual courier management service located in India.

India is a place where there are many uncountable villages and most of them are rural places having travelling problems. It will be very difficult to establish organization in each and every place. This is when franchises help a lot. Franchise is an existing and established local business service that integrates with other business service activities. With the help of these franchise offices it will be easy for people to manage their shipments through available franchise courier services. These locations can also help people over there in having their shipment tracked.

This project is aimed to replace the manual courier service system, with a web-based system providing advantage to the customers, and administrators as well in managing the activities with ease and low cost.

**Objectives of the Project:**

Main objective or goal of this project is to develop a web-based courier system. This project automates a manual system of courier management. New system online courier service which is being developed is intended to automate the courier management process. New system is going to be a web based system. This new web-based system can be made accessible across various branch locations and franchise locations at a very low cost. System is thought to be made as a web-based in order to reduce the installation overhead, costs,

compatibility issues that are associated with a standalone system. New web-based online Courier Service system can be accesses on any computer having an internet connection, irrespective various other requirements such as memory, operating system etc. This new system offers all the services that manual system offered and in addition provides various services like shipment tracking add/remove new courier service, manage franchise applications etc.

**Need or purpose of the project:**

Need for this project is to automate the manual system and reduce the costs associated with the manual system. Manual system is a paper based system where in which every activity related to courier service managed over a paper and activities among various branches are co-ordinated through fax and phone calls. Manually recording the courier related details, shipment details cause various errors and ambiguity among the shipment records. Manual recording involves lot of time and effort, which takes away concentration on the customers. Even customers are unclear about their shipment details, until they get a notification from the receiver.

In order to reduce all these overheads associated with manual courier management system, this new web-based online courier service system is being developed.

Advantages of the New System

1. Reduced costs associated with paper based storage of courier related data
2. Reduced errors and costs associated with the shipments of courier service
3. Manage franchise applications online
4. Integrated activities across various branch locations of the courier service
5. Maintain integrity among the data

6. Increased speed and customer service
7. Improved quality and satisfaction across customers

**Deliverables of the project:**

Outcome of this project online courier service is a working website that provides various courier services and mange courier related activities satisfying all the requirements. Website of the project will be designed using J2EE and Java as the core language.

# LITERATURE REVIEW

Online courier service is a project that addresses needs of many people in countries like India where there aren't many courier services available. There are courier services which are available only to cities. Even tracking service is not appropriate. Rural places people doesn't even have access to the internet. In such situations franchises are used to address the issue.

Courier branch offices are located near cities that have good transportation and internet services. Whereas franchises are used in rural areas where there is less or no internet and less transportation facilities. Franchises can update the courier branch offices regarding courier updates via phone or a fax and they can even update customers with their courier status by contacting nearby branch office.

As courier service nature is to expand day by day, every courier service solution is a web-based one which is quite easy to access without any installation overheads. Non-web-based solutions are not available because these are not feasible and it doesn't satisfy the purpose of expansion. With a web-based system user or branch or franchise operator can be a person who has a basic knowledge of the usage of browser and computer. But with in-house software, it will be hard to deal with installations, maintenance and any kind of unexpected mess-up.

Java or .net programming languages are used in general for these projects, because in-order for them to be used they just need a java or .net enabled browser. Usage of Integrated development environments like Eclipse or NetBeans is more popular. These are making project development and maintenance activities easy. Software update feature of these tools

also keeps project environment technology up to date. Built in plugins feature of these IDE's make project enhancement also easy in future without any major changes.

Considering all these information related to the technology and project idea online courier service is developed with latest technology and great features that address various issues related to this sector.

# SYSTEM DESIGN

Online courier service project is developed using various software engineering techniques such as SDLC methodologies. SDLC (software development life cycle) describes the life cycle process of a system that is being developed. Various software development methodologies are available. Online courier service is developed using the traditional development approach also known as waterfall model.

Initially after the project proposal and requirement analysis, next step is to develop a system design that helps in understand how a system is being developed and what are the various components involved in this process. UML is chosen as a tool for developing the system design. UML is an object oriented modeling language which will be best for the online courier service project that is being developed using JAVA which is also an object oriented language.

New system Online Courier Service is developed by breaking the entire system into three different modules based on their functionalities. Each module is developed individually and then integrated with the all other modules maintaining consistency and integrity. This approach of developing the system can be defined as a divide and conquer approach.

**Module Description:**

Online courier service project contains three important modules administrator module, employee module and customer module. Responsibilities of each module are described below.

**Admin/Administrator Module:**

Admin module is one important module of the online courier service project. Here administrator is the person who is responsible of accessing this module and its activities. Administrator is capable of performing various activities related to the employee, courier, and customer. Administrator is the person responsible for activities like managing various courier services offered, transportation facilities, shipment costs and transportation costs etc. all.

Various activities Admin is Responsible of are:

1. Add or Remove courier service
2. Make changes to any existing courier service
3. Manage employee activities such as and adding, removing
4. Manage franchise applications
5. Manage feedback from customers
6. Manage courier related issues

**Employee Module:**

Employee is another important person who plays a major role in the online courier service project. Here branch officer at each courier branch location is responsible for various courier related activities and employee related activities.

Branch officer is the person who is responsible for starting the shipment tracking record whenever a new courier or shipment is placed by the customer, update transportation details etc. Branch officer is also responsible for updating the shipment tracking and delivery details when shipment is finally delivered to the destination.

Each office or offices from a city or state contains a supervisor to whom employees are supposed to report. Supervisor is the person who manages employee details, answer any queries related to shipments and take necessary steps related to delayed shipments.

Employee Functionalities:

1. Add or Remove new shipment record
2. Track shipment service
3. Manage delayed shipments
4. Update franchise applications

**Customer Module:**

Customer is also one major person or a key role player for the entire project. This is because he is the person for whom the entire service is intended for. Whenever customer arrives to the branch office or a franchise office with the shipment for courier service then employee at branch office is responsible for serving the customer according to his requirements. Once shipment is placed for courier employee gives a unique identification for the customer in order to track the shipment details.

Customer in future can use this tracking id to track the shipment status. In addition to this, customer can register with the courier service for future services if intended to, which adds more security to provide tracking.

**Conceptual website design:**

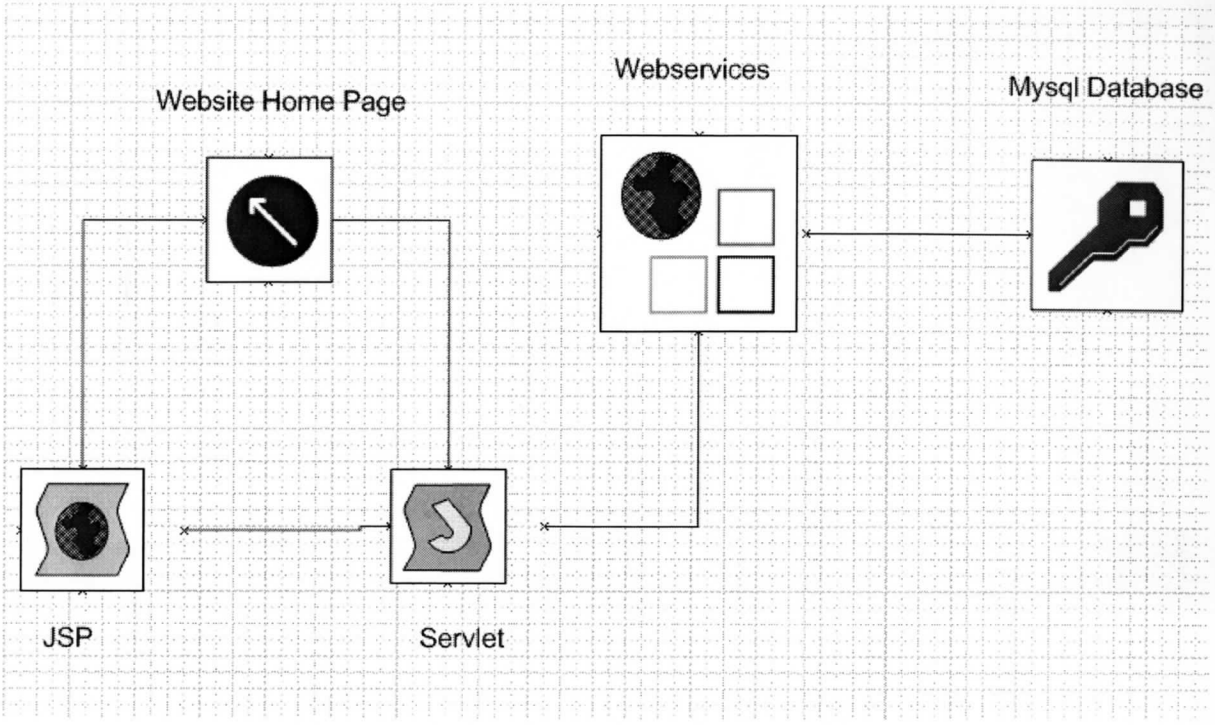


**Figure 1. Conceptual website design of Online Courier Service**

**System Requirements:**

**Hardware Requirements**

- Processor : Pentium III or Higher
- Ram : 512 MB
- Hard Disk : 20 GB

**Software Requirements**

- Operating System : Windows Vista
- Language : JAVA
- Web Technologies : JDBC, Servlet ,JSP
- Database : MySQL 5.1 or MySQL 5.0
- Web Server : Tomcat 6.0 or Tomcat 7.0
- IDE Tools : Eclipse J2ee or NetBeans Java
- Modeling Tool : Star UML

# CONCLUSIONS

My idea of developing an online courier service has been achieved successfully. I was able to complete the project successfully with all the functionalities that I stated in my abstract. During the process of requirement analysis and gathering, initially I came up with huge list of functionalities. Within the given time constraint I felt that implementing all the functionalities will be a tedious task. So I have shorted the requirements list to the basic required functionalities which a simple courier service must possess. This simple system can then be improved or expanded based on the client needs and size of the business.

With proper project management planning techniques, I was able to schedule my task list with appropriate work break down and timelines. This helped me a lot in successful completion of the project in time. After requirement analysis, system design was developing using system analysis and design concepts that I have learnt in one of my master's course. I believe that system analysis and design concepts play a major role in proper execution of the project plan. By having appropriate system design I was able to determine the flow, functionalities, data and methods associated with the functionalities of my online courier service system

While working on this project in the process of achieving the required functionalities I have learned many new concepts and techniques that can be used in developing any web – based project. Online courier service project gave me an opportunity to learn hibernate ORM framework. I initially I thought of developing entire project in Hibernate, but later I learnt that it will be a tough decision since learning and implementing a project code in parallel will be a risky task. So I confined to the usage of hibernate in creating my MYSQL database tables

instead of doing them manually. This will be an additional advantage for the project because it avoids the process of carrying a dump file or database schema file. Using J2ee technologies like servlets, jsp and web technologies like html, java script I was successfully able to complete an working online courier service project with basic functionalities of a courier service.

Online courier service acts as good startup web-based project for countries like India where there are many rural areas with less transportation. Many courier services are confined to cities leaving back the rural areas behind. With the help of this project any local business person can request for franchise application, which once approved can help in facilitating the courier service to rural areas. With the help of franchise offices, courier tracking will also be made easy for the branch employees and helps in expanding their business.

Various other functionalities like, integrating franchise module into the online courier service project, increasing the standards of the project to support international standards etc. are some of the possible future enhancements. My first future insights for this project is to transform my project development using hibernate. For this process phased development process will be the beast approach with one by one module. Having all these new functionalities and enhanced development process online courier service project will be a full-fledged courier service project based on client or business customization.

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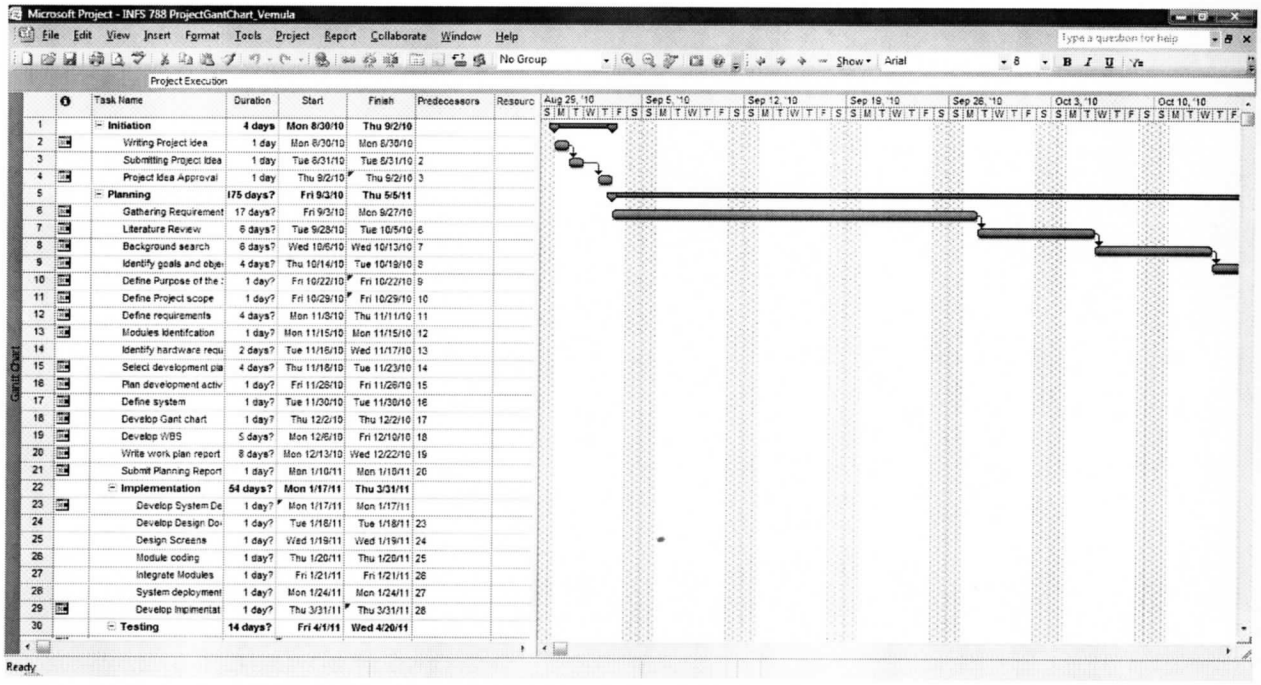
# APPENDICES

## APPENDIX A: USERS' MANUAL

### Project Gant Chart:

Gant Chart is a graphical representation of list of activities that are carried out while doing a project at various stages of project development. Gant chart for online courier service project listing various activities carried out various phases of project development such as initiation, planning, implementation, testing and execution during are as follows




| | Task Name | Duration | Start | Finish | Predecessors | Resource |
|---|---|---|---|---|---|---|
| 1 | Initiation | 4 days | Mon 8/30/10 | Thu 9/2/10 | | |
| 2 | Writing Project Idea | 1 day | Mon 8/30/10 | Mon 8/30/10 | | |
| 3 | Submitting Project Idea | 1 day | Tue 8/31/10 | Tue 8/31/10 | 2 | |
| 4 | Project Idea Approval | 1 day | Thu 9/2/10 | Thu 9/2/10 | 3 | |
| 5 | Planning | 175 days? | Fri 9/3/10 | Thu 5/5/11 | | |
| 6 | Gathering Requirement | 17 days? | Fri 9/3/10 | Mon 9/27/10 | | |
| 7 | Literature Review | 6 days? | Tue 9/28/10 | Tue 10/5/10 | 6 | |
| 8 | Background search | 6 days? | Wed 10/6/10 | Wed 10/13/10 | 7 | |
| 9 | Identify goals and obje | 4 days? | Thu 10/14/10 | Tue 10/19/10 | 8 | |
| 10 | Define Purpose of the : | 1 day? | Fri 10/22/10 | Fri 10/22/10 | 9 | |
| 11 | Define Project scope | 1 day? | Fri 10/29/10 | Fri 10/29/10 | 10 | |
| 12 | Define requirements | 4 days? | Mon 11/8/10 | Thu 11/11/10 | 11 | |
| 13 | Modules Identifcation | 1 day? | Mon 11/15/10 | Mon 11/15/10 | 12 | |
| 14 | Identify hardware requ | 2 days? | Tue 11/16/10 | Wed 11/17/10 | 13 | |
| 15 | Select development pla | 4 days? | Thu 11/18/10 | Tue 11/23/10 | 14 | |
| 16 | Plan development activ | 1 day? | Fri 11/26/10 | Fri 11/26/10 | 15 | |
| 17 | Define system | 1 day? | Tue 11/30/10 | Tue 11/30/10 | 16 | |
| 18 | Develop Gant chart | 1 day? | Thu 12/2/10 | Thu 12/2/10 | 17 | |
| 19 | Develop WBS | 5 days? | Mon 12/6/10 | Fri 12/10/10 | 18 | |
| 20 | Write work plan report | 8 days? | Mon 12/13/10 | Wed 12/22/10 | 19 | |
| 21 | Submit Planning Report | 1 day? | Mon 1/10/11 | Mon 1/10/11 | 20 | |
| 22 | Implementation | 54 days? | Mon 1/17/11 | Thu 3/31/11 | | |
| 23 | Develop System De | 1 day? | Mon 1/17/11 | Mon 1/17/11 | | |
| 24 | Develop Design Do | 1 day? | Tue 1/18/11 | Tue 1/18/11 | 23 | |
| 25 | Design Screens | 1 day? | Wed 1/19/11 | Wed 1/19/11 | 24 | |
| 26 | Module coding | 1 day? | Thu 1/20/11 | Thu 1/20/11 | 25 | |
| 27 | Integrate Modules | 1 day? | Fri 1/21/11 | Fri 1/21/11 | 26 | |
| 28 | System deployment | 1 day? | Mon 1/24/11 | Mon 1/24/11 | 27 | |
| 29 | Develop Implementat | 1 day? | Thu 3/31/11 | Thu 3/31/11 | 28 | |
| 30 | Testing | 14 days? | Fri 4/1/11 | Wed 4/20/11 | | |

**Figure 2. Gant Chart 1**

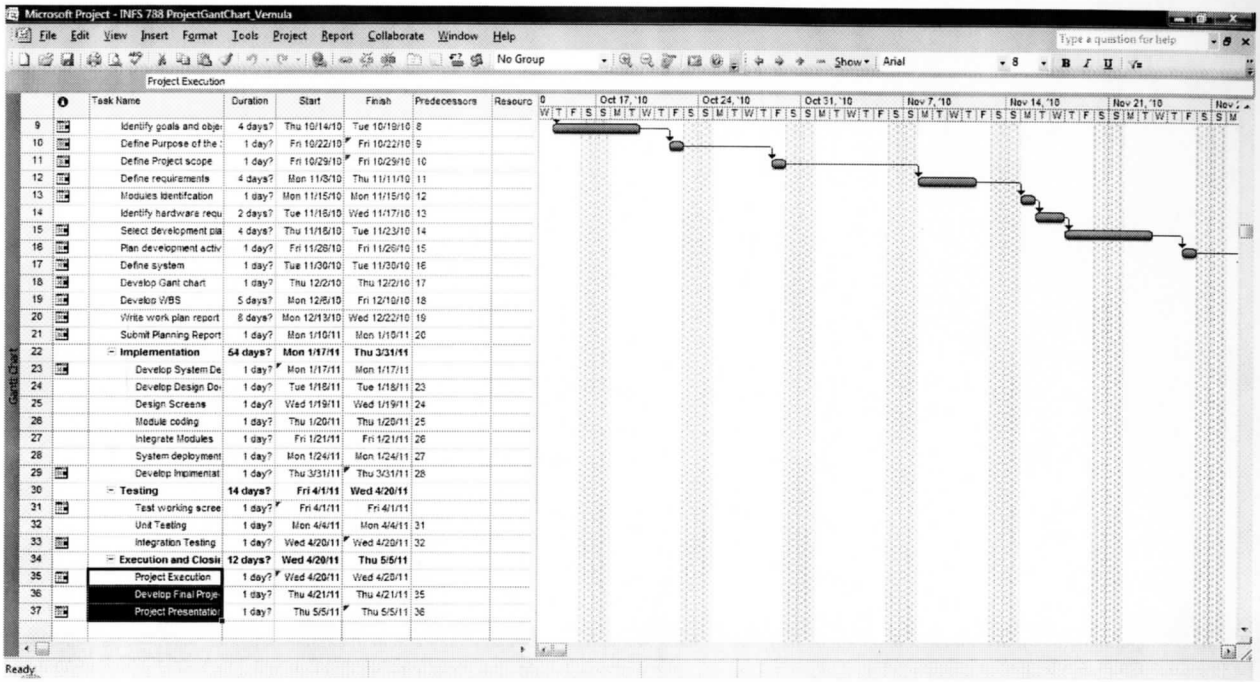



**Figure 3. Gant Chart 2**

## Project Work Breakdown Structure:

1. **Project Initiation**

    1.1 Look for project Ideas

    1.2 Write Project Idea

    1.3 Submit Project Idea

    1.4 Approval for Project Idea

2. **Project Planning**

    2.1 Gather Requirements

    2.2 Literature Review

    2.3 Background Search

    2.4 Identify goals and objectives

    2.5 Define purpose of the system

    2.6 Define Project Scope

2.7 Define Requirements

2.8 Module Identification

2.9 Identify hardware and software required

2.10 Select Development process

2.11 Plan Development Activities

2.12 Define System

2.13 Develop Gant Chart

2.14 Write Work Plan Report

2.15 Submit planning report

**3. Project Implementation**

3.1 Develop System Design

3.2 Develop Design Diagrams

3.3 Develop Design Document

3.4 Design screens

3.5 Modules coding

3.6 Integrate Modules

3.7 System Deployment

3.8 Develop Implementation Document

**4. Project Testing**

4.1 Test working screens

4.2 Unit Testing

4.3 Integration Testing

**5. Project Execution and Closing**

5.1 Project Execution

5.2 Develop final project report

5.3 Final Project Presentation

5.4 Project closing

**System Design Models**

1. **UseCase Diagram for Online Courier Service:**

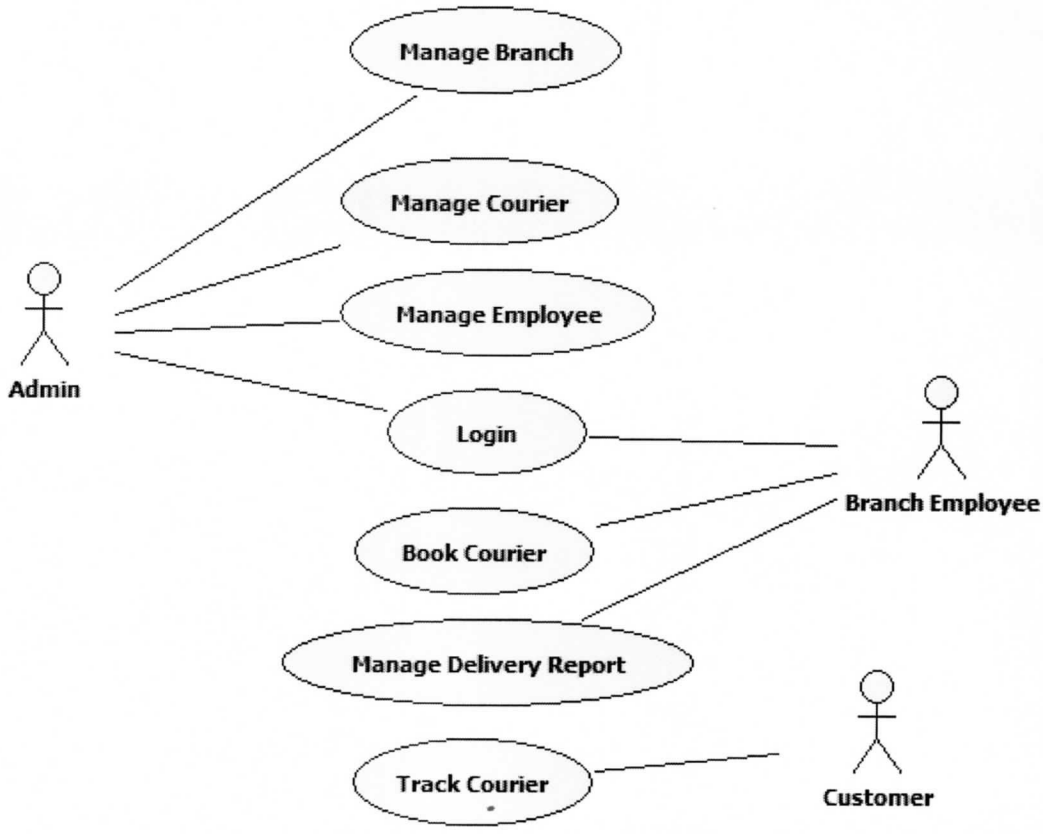



**Figure 4. Online Courier Service UseCase Diagram**

## 2. Sequence Diagrams:

### 2.1. Manage Employee Sequence Diagram:

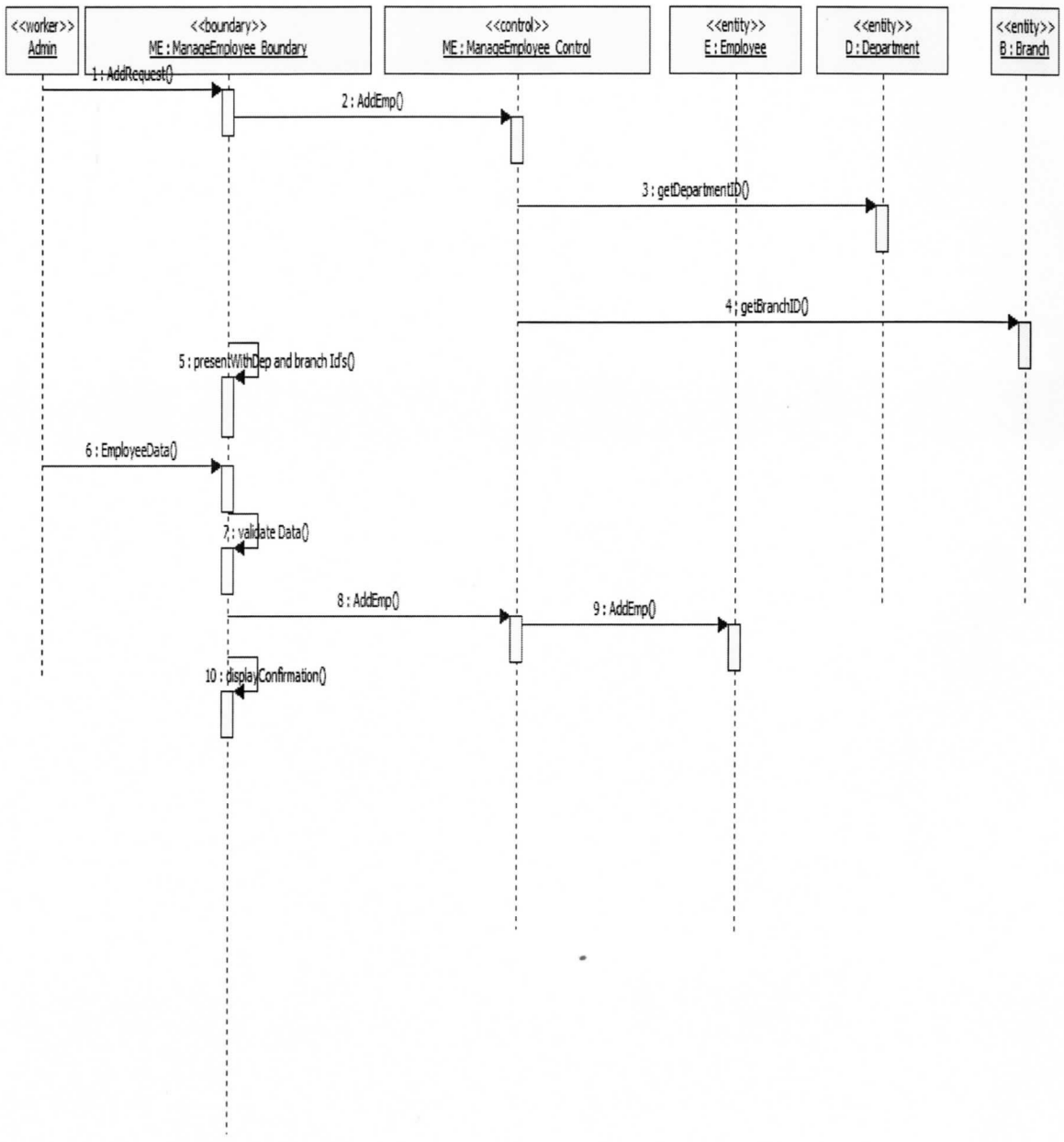



**Figure 5. ManageEmployee Sequence Diagram**

## 2.2. Manage Branch Sequence Diagram:

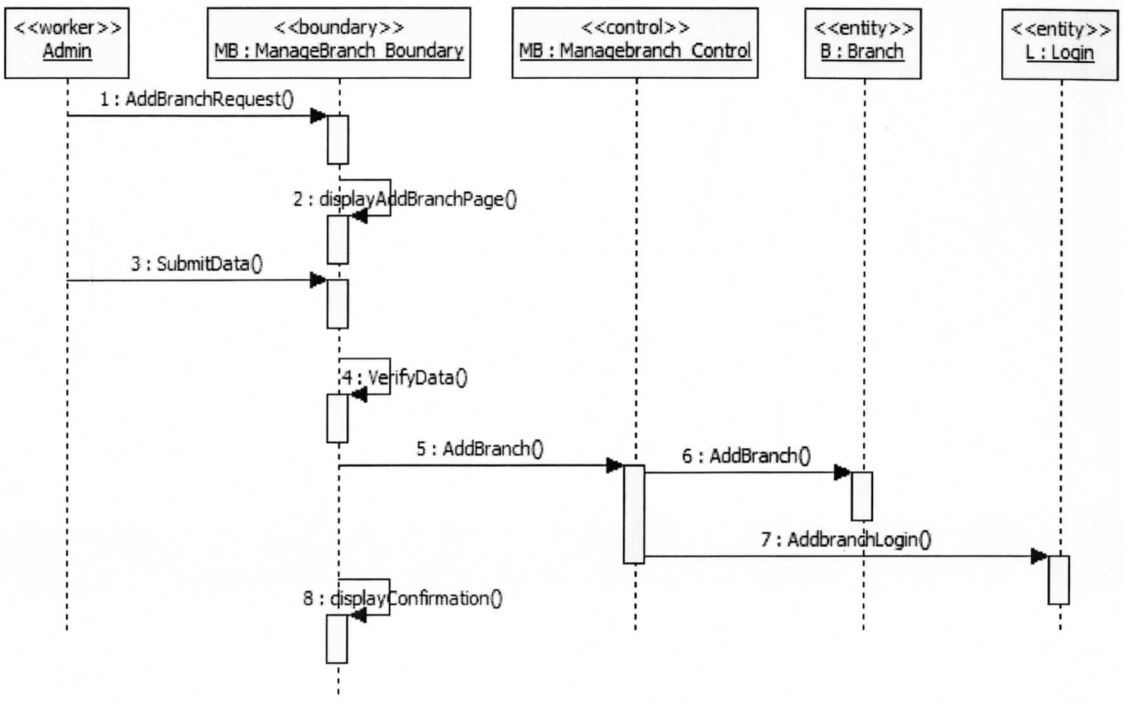



**Figure 6. ManageBranch Sequence Diagram**

## 2.3. Manage Courier Sequence Diagram:

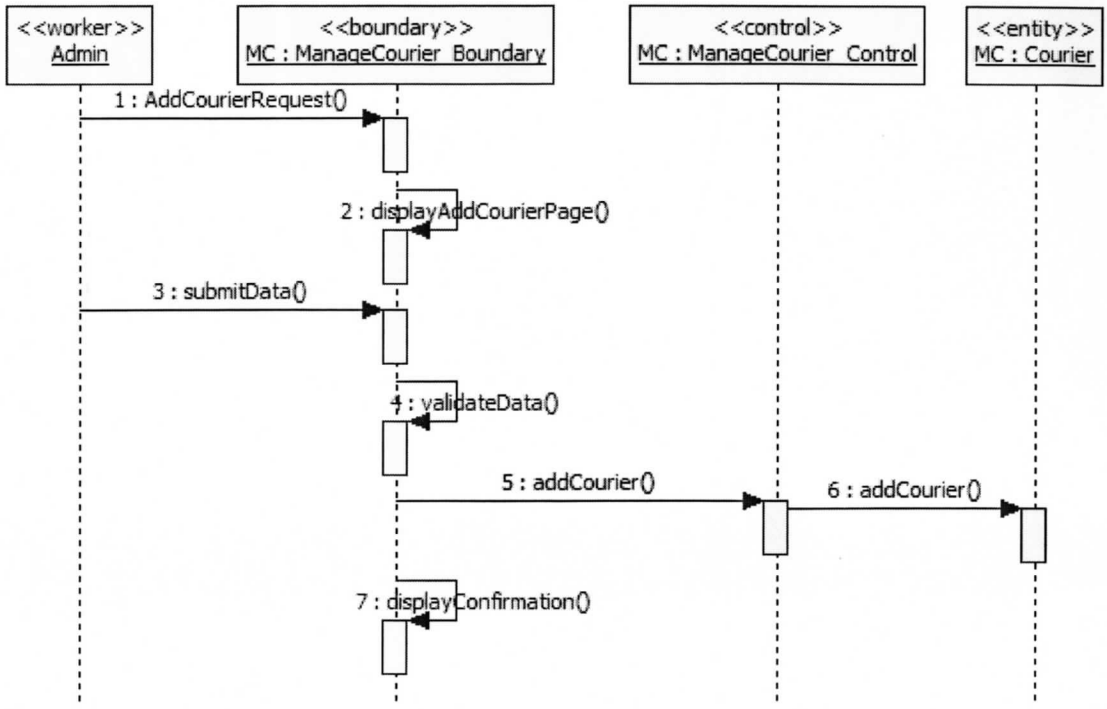



**Figure 7. ManageCourier Sequence Diragram**

## 2.4. BookCourier sequence diagram:

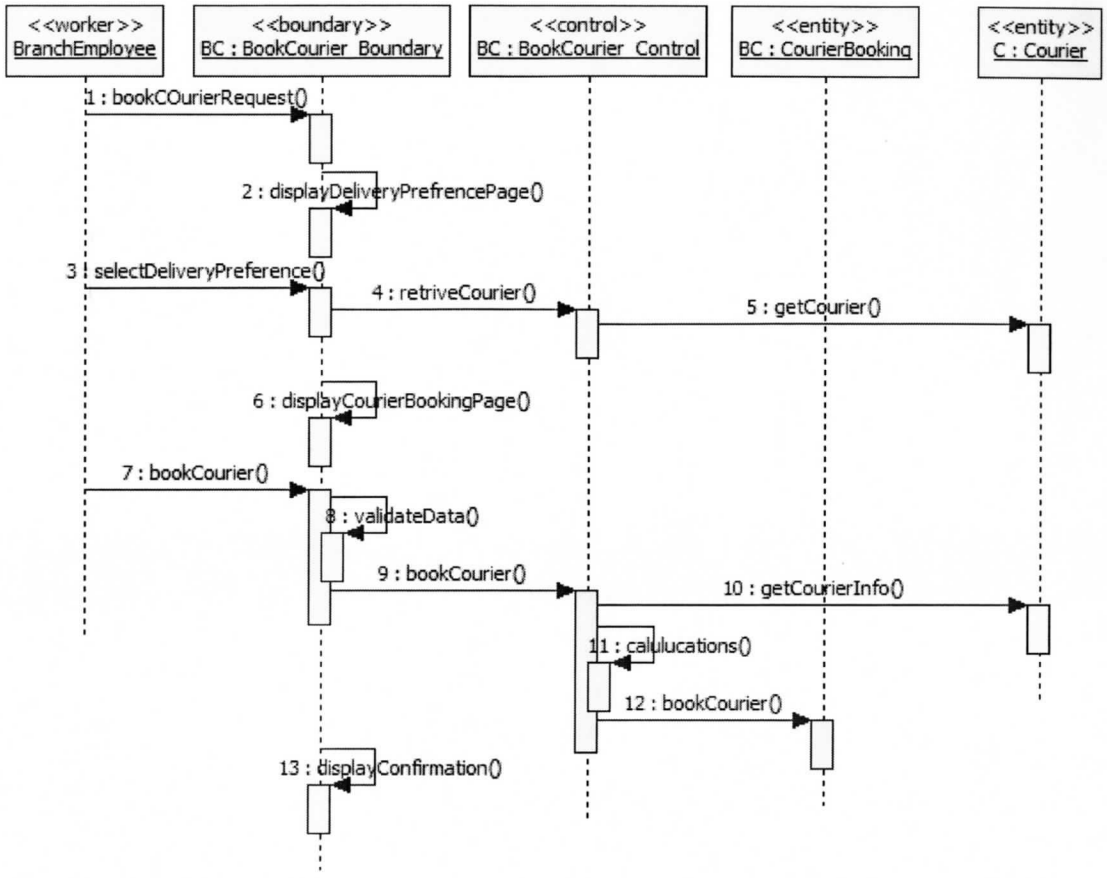



**Figure 8. BookCourier sequence diagram**

## 2.5. Login Sequence Diagram:

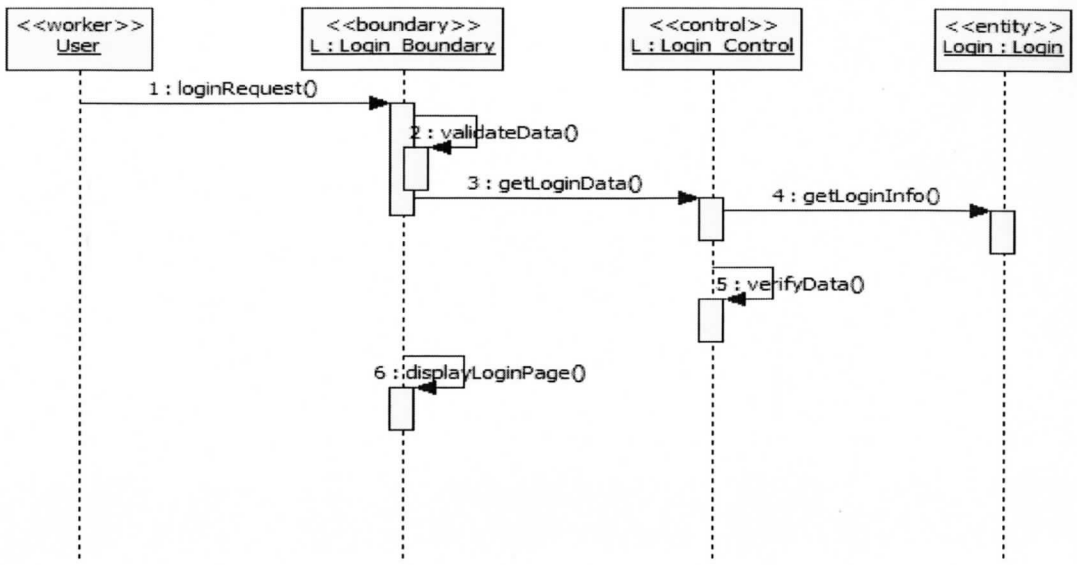



**Figure 9. Login Sequence Diagram**

## 2.6. Track Courier sequence Diagram:

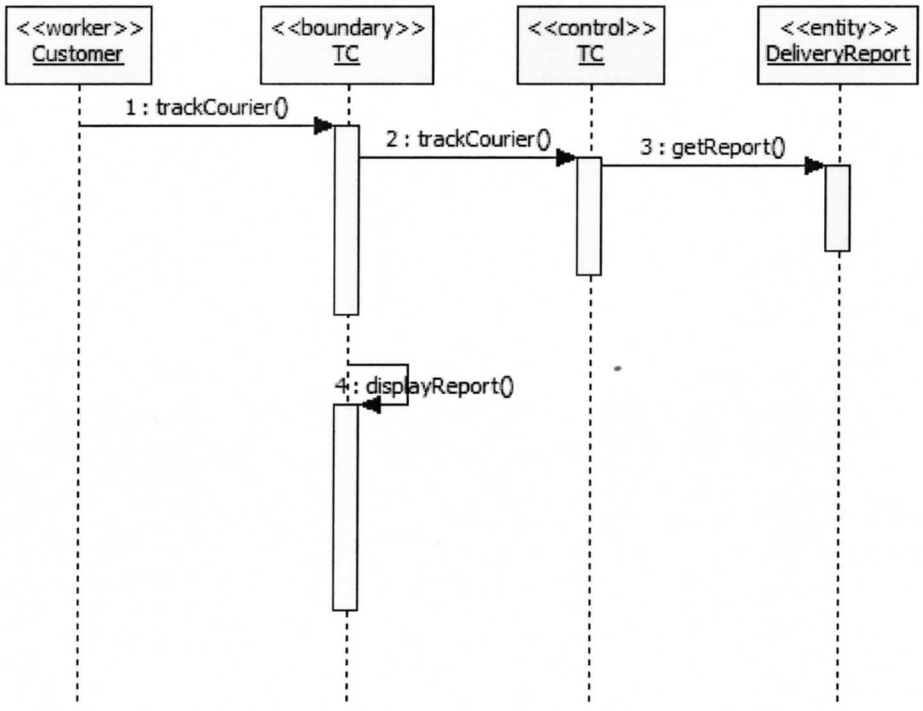



**Figure 10. TrackCourier Sequence Diagram**

# 3. Conceptual Class Diagrams:

## 3.1. Conceptual class diagram for ManageEmployee usecase:

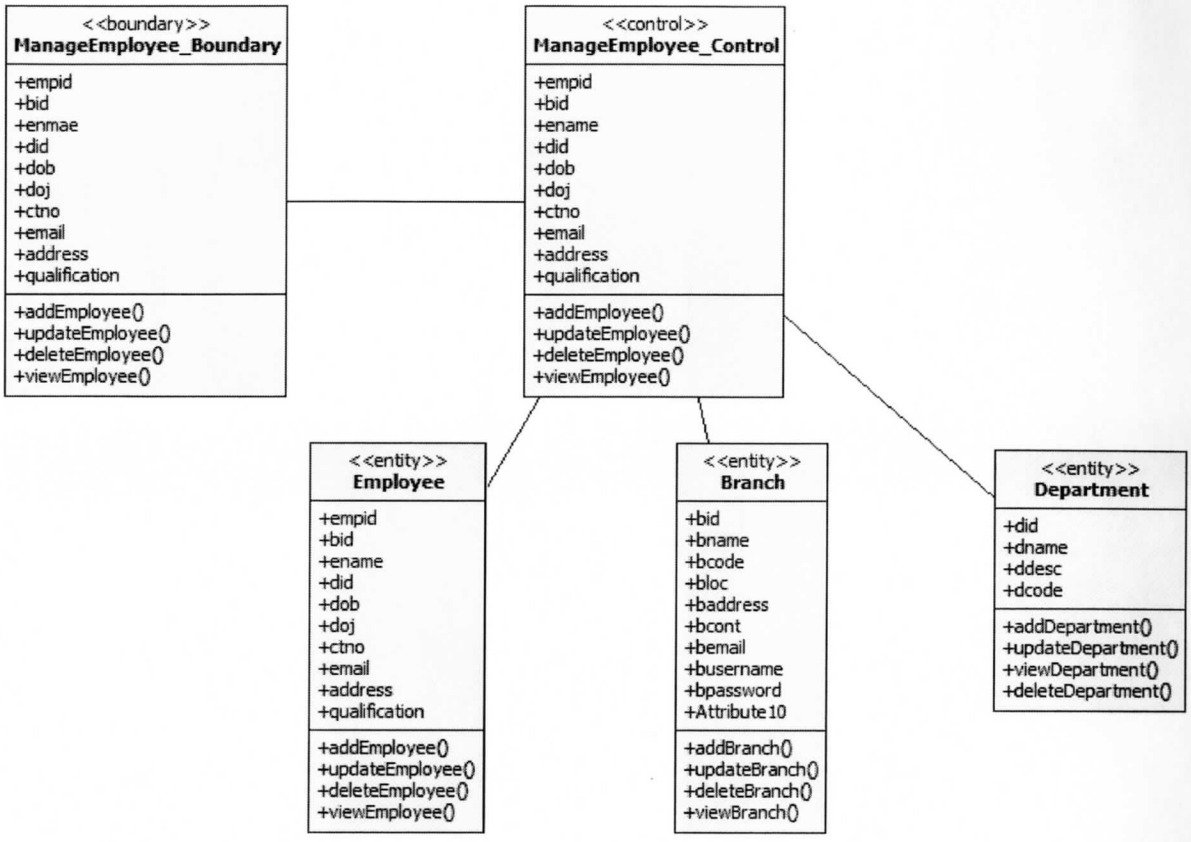



**Figure 11. ManageEmployee Conceptual class diagram**

## 3.2. Conceptual Class diagram for ManageCourier Usecase:

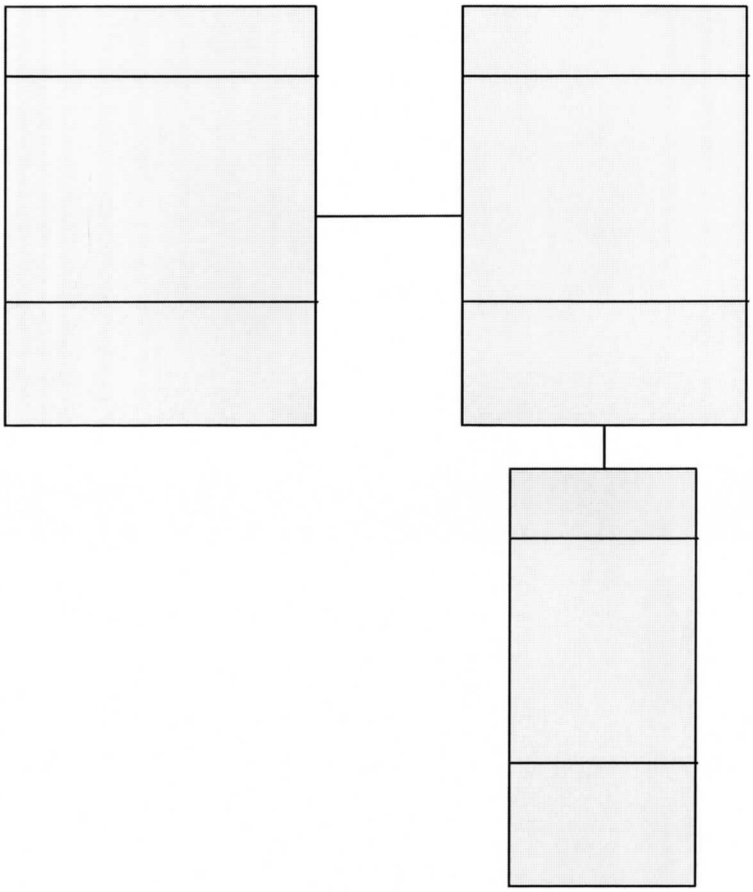


**Figure 12. ManageCourier Conceptual class diagram**

## 3.3. Conceptual class diagram for ManageBranch

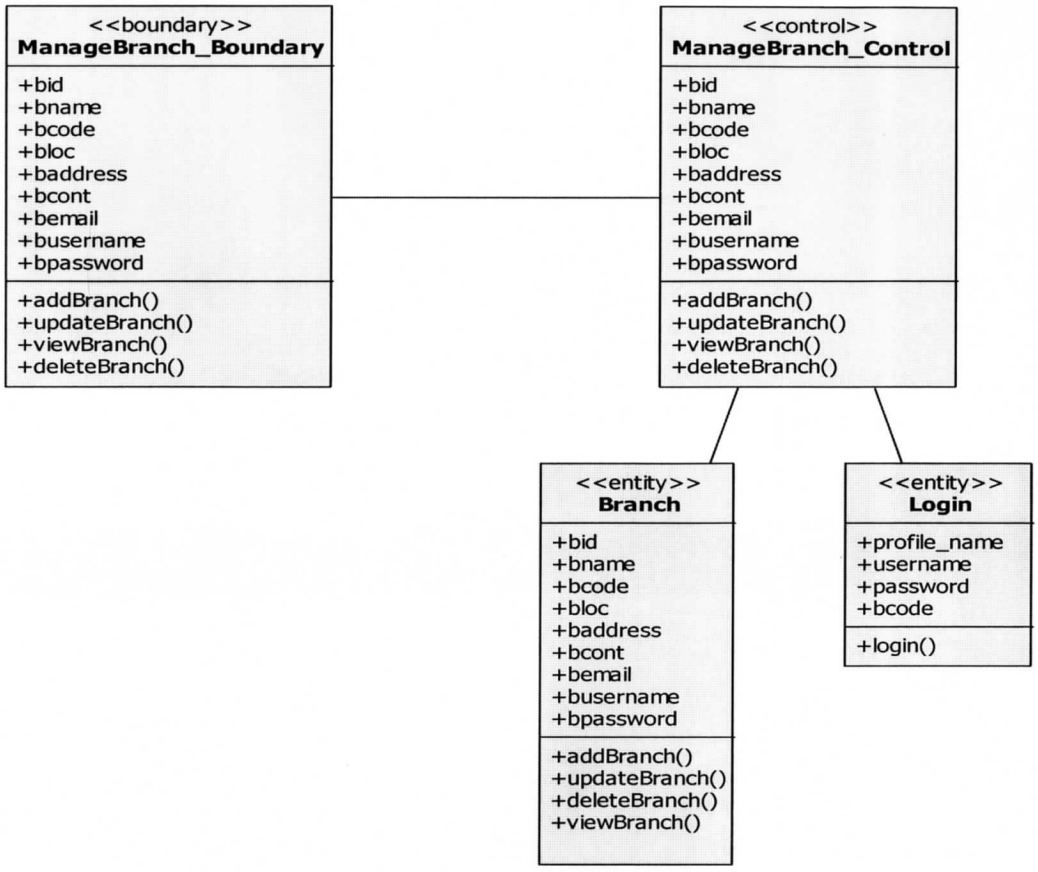



**Figure 13. ManageBranch conceptual class diagram**

## 3.4. Conceptual class diagram for track courier usecase:

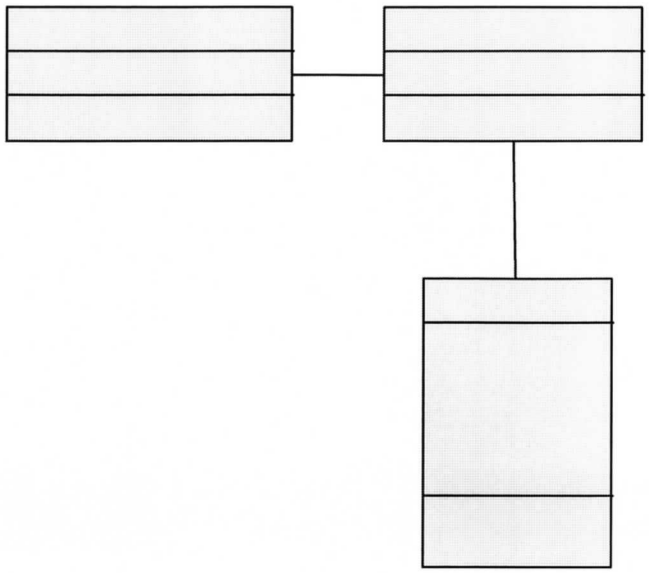


**Figure 14. Track Courier Conceptual Class Diagram**

## 3.5. Conceptual class of BookCourier usecase:

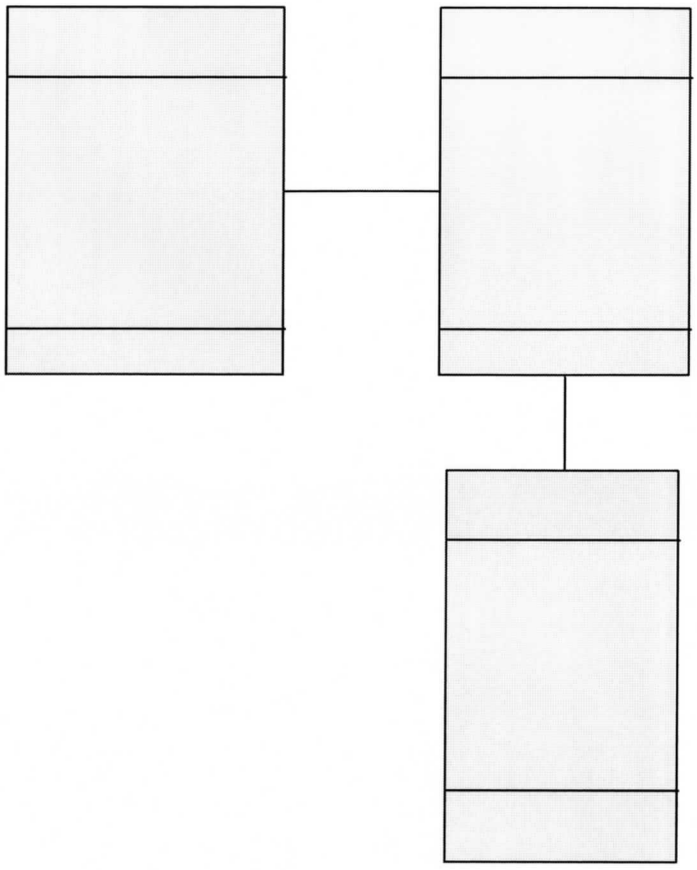


**Figure 15. BookCourier conceptual class diagram**

### 3.6. Login conceptual class:

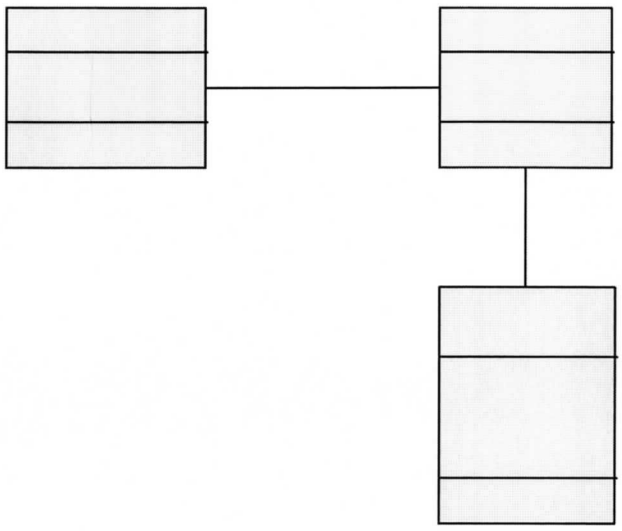


**Figure 16. Login conceptual class diagram**

**Database tables:**

MySQL 5.1 is the version of the database used in this project.

List of some database tables used in this project

**Branchreg Table:**

| | | |
|---|---|---|
| Slno | int(10) | Primary Key |
| Bname | varchar(50) | |
| Bcode | varchar(50) | Primary Key |
| Bloc | varchar(50) | |
| Baddress | varchar(150) | |
| Bphno | varchar(10) | |
| Bfax | varchar(10) | |
| Bemail | varchar(50) | |
| Busername | varchar(50) | |
| Bpassword | varchar(50) | |

**Courier Table:**

| | | |
|---|---|---|
| Cid | int(10) | Primary Key |
| Cname | varchar(50) | Unique Key |
| Ccode | varchar(50) | |
| Minweig | float | |
| Tmode | varchar(50) | |
| Basecost | float | |
| Excost | float | |
| Deltime | varchar(50) | |

**Courierbooking Table**

| | | |
|---|---|---|
| Bid | varchar(50) | Foreign key |
| Eid | varchar(50) | Foreign key |
| Consignmentno | varchar(10) | Primary key |
| Date | varchar (10) | |
| Cusname | varchar(20) | |

| | | |
|---|---|---|
| Ctype | varchar(10) | |
| Toaddress | varchar(50) | |
| Fromaddress | varchar(50) | |
| Cost | float | |
| Weight | varchar(10) | |
| Delpref | varchar(50) | |
| Cuscno | varchar(10) | |

**Empdetails table:**

| | | |
|---|---|---|
| Branch | varchar(50) | Foreign key |
| Eid | varchar(50) | Primary key |
| Ename | varchar(50) | |
| Gender | varchar(50) | |
| Qualification | varchar(50) | |
| Doj | varchar(10) | |
| Dob | varchar(10) | |
| Designation | varchar(50) | |
| Department | varchar(50) | Foreign key |
| Address | varchar(150) | |
| Cno | varchar(10) | |
| Email | varchar(50) | |

**Project Sample Code:**

**Sample code for Home page:**

```
<html>
<head>
<title>home</title>
<script>
function validations()
{

if((document.getElementById("uname").value=="")&&(document.user.password.value==""))
{
window.alert("enter  username and password");
}
else if(document.user.password.value=="")
{
window.alert("enter   password");
}
else if(document.user.uname.value=="")
{
window.alert("enter   username");
}
}
function verify()
{
        if(document.no.cno.value=="")
          {
           alert("enter consignment no");
          }
}
</script>
```

```
</head>
<body>
        <center>
        <table align=center width=100%>
        <tr><td align="center" colspan=2><img src="images[15].jpg"><b><font size=7
color=maroon>ONLINE COURIER SERVICE</font></b></td></tr>
        <tr><td align="center" colspan=2><h3><a
href="history.html">History</a>         
 <a
href="branches.jsp">Branches</a>        &nbs
p <a href="franchiseapp.jsp">Franchise
Application</a>          <a
href="suggestion.html">Suggestions</a></h3></td></tr>
        <tr><td rowspan=2><pre><img src="c2.bmp"><img src="a.gif"></pre> </td><td>
        <form name=no action="http://localhost:8080/ONCSTest/consignmentno" method
=post><h4 align=center>Consignment No :<input type="text" size=15 name=cno><input
type="submit" value="TRACK" name=submit onclick="verify()"></h4></form></td>
        </tr>
        <tr><td><form name=user action="http://localhost:8080/ONCSTest/login" method
="post"><h4 align=center>User Login<br /></h4>
        <h4 align=center>User - ID<input type="text" size=15 name=uname><br
/>Password<input type="password" name=password size=15><br /><input type="submit"
value="LOGIN" name=submit onclick="validations()"></h4>
        </form></td></tr>
        </table>
        </center>
        </body>
        </html>
```

**Courier registration Servlet code:**

```
import java.io.IOException;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.*;
import java.sql.*;

/**
 * Servlet implementation class courierregistration
 */
public class courierregistration extends HttpServlet {
        private static final long serialVersionUID = 1L;
        HttpSession session =null;
          Statement st = null;
          Connection con=null;
          ResultSet rs=null;

            public void doPost(HttpServletRequest req,HttpServletResponse res)
throws IOException,ServletException
            {
              try
```

```
{
        System.out.println("connection is establishing.....");
          Class.forName("com.mysql.jdbc.Driver");

con=DriverManager.getConnection("jdbc:mysql://localhost:3306/online_courier", "root","");
          if(con!=null)
         System.out.println("Connected------>");
        else
         System.out.println("Connection Failed------>");

          String s = req.getParameter("submit");
         session=req.getSession(true);

    if(s.equals("ADDNEW"))
    {     int i1=1;
           st=con.createStatement();
           rs=st.executeQuery("select * from courier");
            while(rs.next())
              {
             i1++;
            }
           session.setAttribute("i1",i1);
```

```
res.sendRedirect("http://localhost:8080/ONCSTest/addcourier.jsp");
                }

                else if(s.equals("BACK"))
                {

res.sendRedirect("http://localhost:8080/ONCSTest/couriers.jsp");
                }

                else if(s.equals("SAVE"))
                {

                    System.out.println("s"+s);
                    int cid = Integer.parseInt(req.getParameter("cid"));
                    System.out.println("cid"+cid);
                    String ctname = req.getParameter("ctname");
                    System.out.println("cname"+ctname);
                    String ccode= req.getParameter("ccode");
                    System.out.println("ccode"+ccode);
                    String weight = req.getParameter("weight");
```

```
System.out.println("weight"+weight);
String mode= req.getParameter("mode");
System.out.println("mode"+mode);
String cost= req.getParameter("cost");
System.out.println("cost"+cost);
String ec= req.getParameter("ec");
System.out.println("ec"+ec);
String dt= req.getParameter("dt");
System.out.println("dt"+dt);

session.setAttribute("cid",cid);
session.setAttribute("ctname",ctname);

if(ctname.equals("")||ccode.equals("")||weight.equals("")||mode.equals("")||cost.equals(
"")||ec.equals("")||dt.equals(""))
{

res.sendRedirect("http://localhost:8080/ONCSTest/addcourier.jsp");
}

else
{
st=con.createStatement();
```

```
rs=st.executeQuery("select * from courier");
    while(rs.next())
        {       int b=Integer.parseInt(rs.getString(1));
                System.out.println(b);
                if(cid==b)

res.sendRedirect("http://localhost:8080/ONCSTest/coureirduplication..jsp");
                }
                int i = st.executeUpdate("insert into courier
values("+cid+",'"+ctname+"','"+ccode+"','"+weight+"','"+mode+"','"+cost+"','"+ec+"','"+dt+"')
");
                if(i>0)
                  {
                      System.out.println("Link to jsp");

res.sendRedirect("http://localhost:8080/ONCSTest/csuccreg.jsp");

                  }
                }
            }

        else if(s.equals("SEARCH"))
```

```
{
        HttpSession session=req.getSession(true);
        st=con.createStatement();

        System.out.println("entered into search");
        String  cid=req.getParameter("cid");
        System.out.println("========Code val"+cid);
         if(cid.equals("") )

res.sendRedirect("http://localhost:8080/ONCSTest/couriers.jsp");
        else
        {
              System.out.println("========C");
           int  cid1 = Integer.parseInt(req.getParameter("cid"));
           System.out.println("========C");
                session.setAttribute("cid",cid1);
                rs=st.executeQuery("select * from courier");
             if(rs!=null)
                System.out.println("result is ready");

                int flag=0;

                while(rs.next() )
```

```
{
        System.out.println("entered into while loop");
          if((rs.getInt(1))==cid1)
        {
              flag=1;
              String ctname = rs.getString(2);
                 String ccode = rs.getString(3);
                 String weight = rs.getString(4);
              String mode = rs.getString(5);
                 String cost = rs.getString(6);
                 String ec = rs.getString(7);
                 String dt=rs.getString(8);

session.setAttribute("ctname",ctname);
                 session.setAttribute("ccode",ccode);
                    session.setAttribute("weight",weight);
                    session.setAttribute("mode",mode);
                    session.setAttribute("cost",cost);
                    session.setAttribute("ec",ec);
                    session.setAttribute("dt",dt);
```

```
res.sendRedirect("http://localhost:8080/ONCSTest/courierdetails.jsp");
                                                    }
                                        //else if(dcode=="" )
                                          //{
                                        //
        res.sendRedirect("http://localhost:8080/ONCSTest/couriers.jsp");
                                        //}
                }
                                        if(flag==0)
                                        {
        res.sendRedirect("http://localhost:8080/ONCSTest/courierunsucc.jsp");
                                        }
                                      } //first if
                            }
                                        else if(s.equals("DELETE"))
                            {
```

```
                int cid=Integer.parseInt(req.getParameter("cid"));
                    st = con.createStatement();

                    session.setAttribute("cid",cid);

                    int j=st.executeUpdate("delete from courier where
cid='"+cid+"'");
                    if(j!=0)
                    {
                        System.out.println("in if lpoooop");

    res.sendRedirect("http://localhost:8080/ONCSTest/cdeletesucc.jsp");
                    }
                    else
                    {

    res.sendRedirect("http://localhost:8080/ONCSTest/cdeleteunsucc.jsp");
                    }
                }


                else if(s.equals("UPDATE"))
                  {
```

```
HttpSession session=req.getSession(true);
st=con.createStatement();

System.out.println("entered into update");


   rs=st.executeQuery("select * from courier");

    if(rs!=null)
     {
        System.out.println("result is ready");
    }

       int cid=Integer.parseInt(req.getParameter("cid"));

        String ctname = req.getParameter("ctname");
        String ccode= req.getParameter("ccode");
        String weight = req.getParameter("weight");
        String dist = req.getParameter("dist");
        String mode = req.getParameter("mode");
        String cost = req.getParameter("cost");
        String ec = req.getParameter("ec");
        String dt = req.getParameter("dt");
```

```
int flag=0;
while(rs.next() )
 {
        System.out.println("entered into while loop");
        if(rs.getInt(1)==cid)
          {System.out.println("data encountered");
            flag=1;

            String ctname1 = rs.getString(2);
                String ccode1= rs.getString(3);
            String weight1 = rs.getString(4);


            String mode1 = rs.getString(5);
                String cost1 = rs.getString(6);
            String ec1  = rs.getString(7);
            String dt1 = rs.getString(8);


            if(ctname!=ctname1)
            {
                st.executeUpdate("update courier
set cname="+"'"+ctname+"'"+"where cid='"+cid+"'");
```

```
}

if(ccode!=ccode1)
{
        st.executeUpdate("update courier
set  ccode="+"'"+ccode+"'"+"where cid='"+cid+"'");
}

if(weight!=weight1)
{
        st.executeUpdate("update courier
set minweig="+"'"+weight+"'"+"where cid='"+cid+"'");
}

if(mode!=mode1)
    {
        st.executeUpdate("update courier
set tmode="+"'"+mode+"'" +"where cid='"+cid+"'");
}

if(cost!=cost1)
{
```

```
                                        st.executeUpdate("update courier
set basecost="+"'"+cost+"'"+"where cid='"+cid+"'");
                                        }
                                        if(ec!=ec1)
                                        {
                                        st.executeUpdate("update courier
set excost="+"'"+ec+"'"+"where cid="+"'"+cid+"'");
                                        }
                                        if(dt!=dt1)
                {
                  st.executeUpdate("update courier set deltime="+"'"+dt+"'"+"where
cid='"+cid+"'");
                }
                                        }

res.sendRedirect("http://localhost:8080/ONCSTest/cupdatesucc.jsp ");
                        }

                }
```

```
                }
                catch(Exception e)
                {
                        e.printStackTrace();
                }
            }
        }
```

**JSP code for EmployeeInformation :**

```
<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
import="java.sql.*,java.util.*,java.text.*" pageEncoding="ISO-8859-1"%>
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<% Class.forName("com.mysql.jdbc.Driver");

 Connection
con=DriverManager.getConnection("jdbc:mysql://localhost:3306/online_courier","root","");
 Statement st=con.createStatement();
 ResultSet rs=st.executeQuery("select * from empdetails");
 session=request.getSession(true);
 java.util.Date d=null;
 d=new java.util.Date();
 DateFormat df = new SimpleDateFormat("dd-MM-yy");
 String fDate = df.format(d);
 int a=1;
 while(rs.next())
 {
        a++;
 }
 Statement st1=con.createStatement();
```

```
 ResultSet rs1 = st1.executeQuery("select * from branchreg");
 Statement st2=con.createStatement();
 ResultSet rs2 = st2.executeQuery("select * from department");
%>
<html>
<head>
<title>department</title>

<script>
function verify()
{
        var n=document.emp1.email.value.indexOf("@");
        var m=document.emp1.email.value.lastIndexOf(".");
  if(document.getElementById("branch").selectedIndex==0)
 {
        window.alert("select Branch");
        return false;
 }
 else if(document.emp1.eid.value=="")
 {
 window.alert("Enter EmployeeId");
        return false;
 }


 else if(document.emp1.ename.value=="")
 {
 window.alert("Enter Employee Name");
        return false;
 }
 else if(document.getElementById("gender").selectedIndex==0)
```

```
{
        window.alert("Select Gender");
        return false;
}
 else if(document.getElementById("qualification").selectedIndex==0)
{
        window.alert("Select Qualification");
        return false;
}
else if(document.emp1.dob.value=="")
{
window.alert("Enter Date Of Birth");
        return false;
}
else if(document.emp1.doj.value=="")
{
window.alert("Enter Date Of Joining");
        return false;
}
else if(document.emp1.desg.value=="")
{
window.alert("Enter Designation");
        return false;
}
else if(document.getElementById("dept").selectedIndex==0)
{
 window.alert("Enter Department");
        return false;
}
else if(document.emp1.add.value=="")
{
```

```
        window.alert("Enter Address");
                return false;
        }
        else if(document.emp1.cno.value=="")
        {
        window.alert("Enter Contact Number");
                return false;
        }
        else if(isNaN(document.emp1.cno.value))
        {
        window.alert("Enter Valid Contact Number");
                return false;
        }
        else if((document.emp1.cno.value.length)>12)
        {
        window.alert("Enter Valid Contact Number");
                return false;
        }
        else if(document.emp1.email.value=="")
        {
        window.alert("Enter E-mail");
                return false;
        }
        else if(n<1||m-n<2)
        {
        window.alert("Enter Valid Email");
                return false;
        }
}

</script>
```

```
</head>
<body>
<center>
<form name=emp1 action="http://localhost:8080/ONCSTest/empdetails"
method=post>
<table align=center>
<tr><td><b>Branch ID</b></td><td><select name=branch id=branch><option>
<%while(rs1.next())
  {
     String bcode=rs1.getString(3); %>
          <option><%= bcode%>
 <%} %>
<tr><td><b>Employee ID</b></td><td><input type="text" name=eid value=<%= a
%>></td></tr>
<tr><td><b>Employee Name</b></td><td><input type="text"
name=ename></td></tr>
<tr><td><b>Gender</b></td><td><select
name=gender><option><option>male<option>female</select></td></tr>
<tr><td><b>Qualification</b></td><td><select
name=qualification><option><option>S.S.C<option>Intermediate<option>Degree<option>P
.G</select></td></tr>
<tr><td><b>Date Of Birth(dd/mm/yy)</b></td><td><input type="text" name=dob>
</td></tr>
<tr><td><b>Date Of Joining (dd/mm/yy)</b></td><td><input type="text" name=doj
value=<%=fDate %>></input></td></tr>
<tr><td><b>Designation</b></td><td><input type="text" name=desg></td></tr>
<tr><td><b>Department</b><td><select name=dept id=dept><option>
  <%  while(rs2.next())
  {
     String dcode=rs2.getString(2); %>
```

```
<option><%=dcode%>
<% } %>
<tr><td><b>Address</b><td><textarea name=add cols=16></textarea>
<tr><td><b>Contact No</b><td><input type="text" name=cno>
<tr><td><b>E-Mail</b></td><td><input type="text" name=email></td></tr>
</table>
<pre><input type=submit name=submit value="SAVE" onClick="return
verify()"></input><input type="submit" name=submit value="BACK"></input><input
type="reset" name=reset value="RESET"></input></pre>
</form>
</center>
</body>
</html>
```

**Branch registration servlet code:**

```
import java.io.*;
import javax.servlet.*;
import javax.servlet.http.*;
import java.sql.*;

public class branchregistration extends HttpServlet
{
  HttpSession session =null;
  Statement st = null;
  Connection con=null;
  ResultSet rs=null;

    public void doPost(HttpServletRequest req,HttpServletResponse res) throws
IOException,ServletException
    {
      try
       {
```

```
            System.out.println("connection is establishing.....");
              Class.forName("com.mysql.jdbc.Driver");

con=DriverManager.getConnection("jdbc:mysql://localhost:3306/online_courier", "root","");
              System.out.println("----------connection is established In BRRR--");
             if(con!=null)
                  System.out.println("Connected------>");
             else
                        System.out.println("Connection Failed------>");

               String s = req.getParameter("submit");
                 session=req.getSession(true);
                 System.out.println(s);
        if(s.equals("ADDNEW"))
        {       int i1=1;
        System.out.println("Entered AddNew loop");
              st=con.createStatement();
              rs=st.executeQuery("select * from branchreg");
               while(rs.next())
                 {
                 i1++;
                }
              session.setAttribute("i1",i1);
                        res.sendRedirect("http://localhost:8080/ONCSTest/addnew.jsp");
        }// ADDNEW CASE CLOSED


       else if(s.equals("SAVE"))
       {

           System.out.println("=/nnnnn????="+s);
```

```
int slno = Integer.parseInt(req.getParameter("slno"));
String bname = req.getParameter("bname");
String   bcode= req.getParameter("bcode");
String bloc = req.getParameter("bloc");
String badd = req.getParameter("badd");
 String cno = req.getParameter("cno");
String fax = req.getParameter("fax");
String email = req.getParameter("email");
String uname=req.getParameter("uname");
String pwd=req.getParameter("pwd");
System.out.println(pwd);
String profile="Branch";

session.setAttribute("bcode",bcode);
session.setAttribute("bloc",bloc);

if(bname.equals("")||bcode.equals("")||bloc.equals("")||badd.equals("")||cno.equals("")||
fax.equals("")||email.equals("")||uname.equals("")||pwd.equals(""))
    {
        res.sendRedirect("http://localhost:8080/ONCSTest/addnew.jsp");
    }
else
{

st=con.createStatement();

rs=st.executeQuery("select * from branchreg");

if(rs!=null)
System.out.println("branchcode is selected");
```

```
while(rs.next())//SEARCH FROM DBASE
{       String b=rs.getString(3);
        System.out.println(b);

        if(bcode.equals(b))
        res.sendRedirect("http://localhost:8080/ONCSTest/duplication.jsp");
}//WHILE CLOSED



        int i = st.executeUpdate("insert into branchreg values(" +
slno+",'"+bname+"','"+bcode+"','"+bloc+"','"+badd+"','"+ cno+"','"+fax
+"','"+email+"','"+uname+"','"+pwd+"')");
          if(i>0)
    {
              int j = st.executeUpdate("insert into LOGIN_MASTER
values('"+profile+"','"+uname+"','"+pwd+"','"+bcode+"')");
              if(j>0)
              {
          System.out.println("Link to jsp");
          res.sendRedirect("http://localhost:8080/ONCSTest/succreg.jsp");
              }
              else
              {
                    int k = st.executeUpdate("delete from branchreg where
bcode='"+bcode+"'");
              }

    }
        /*if(i>0 && j>0)
```

```
                {
                    System.out.println("Link to jsp");
                    res.sendRedirect("http://localhost:8080/ONCSTest/succreg.jsp");

                }//IF CLOSED*/
            }//ELSE CLOSED
        }//SAVE CASE CLOSED

        else if(s.equals("BACK"))
        {
            res.sendRedirect("http://localhost:8080/ONCSTest/branch info.jsp");
        }

        else if(s.equals("DELETE"))
        {
            String bcode=req.getParameter("bcode");
            st = con.createStatement();

            session.setAttribute("bcode",bcode);

            int j=st.executeUpdate("delete from branchreg where
branchcode='"+bcode+"'");
            if(j!=0)
            {
                System.out.println("in if lpoooop");
                res.sendRedirect("http://localhost:8080/ONCSTest/srchsucc.jsp");
            }//IF CLOSED
            else
            {
                res.sendRedirect("http://localhost:8080/ONCSTest/srchunsucc.jsp");
            }//ELSE CLOSED
```

```
}//DELETE CLOSED



else if(s.equals("SEARCH"))
{
        HttpSession session=req.getSession(true);
        st=con.createStatement();

        System.out.println("entered into search");
         String bcode=req.getParameter("bcode");

         session.setAttribute("bcode",bcode);
        rs=st.executeQuery("select * from branchreg");
  if(rs!=null)
         System.out.println("result is ready");

        if(bcode.equals(""))
        res.sendRedirect("http://localhost:8080/ONCSTest/branch info.jsp");

         int flag=0;

        while(rs.next() )//SEARCH FROM DBASE
         {  System.out.println("entered into while loop");
                if(bcode.equals(rs.getString(3)))
                {
                        flag=1;
                        int slno = rs.getInt(1);
                        String bname = rs.getString(2);
                        String bloc = rs.getString(4);
```

```
else if(s.equals("UPDATE"))
  {
      HttpSession session=req.getSession(true);
      st=con.createStatement();

      System.out.println("entered into update");


         rs=st.executeQuery("select * from branchreg");

          if(rs!=null)
           {
              System.out.println("result is ready");
         }

             String bcode=req.getParameter("bcode");

                String bname = req.getParameter("bname");
                String bloc = req.getParameter("bloc");
                String badd = req.getParameter("badd");
                String cno = req.getParameter("cno");
                String fax = req.getParameter("fax");
                String email = req.getParameter("email");
                 int flag=0;
                while(rs.next() )//SEARCH FROM DBASE
                  {
                          System.out.println("entered into while loop");
                           if(rs.getString(3).equals(bcode))
                             {
                                System.out.println("data encountered");
                               flag=1;
```

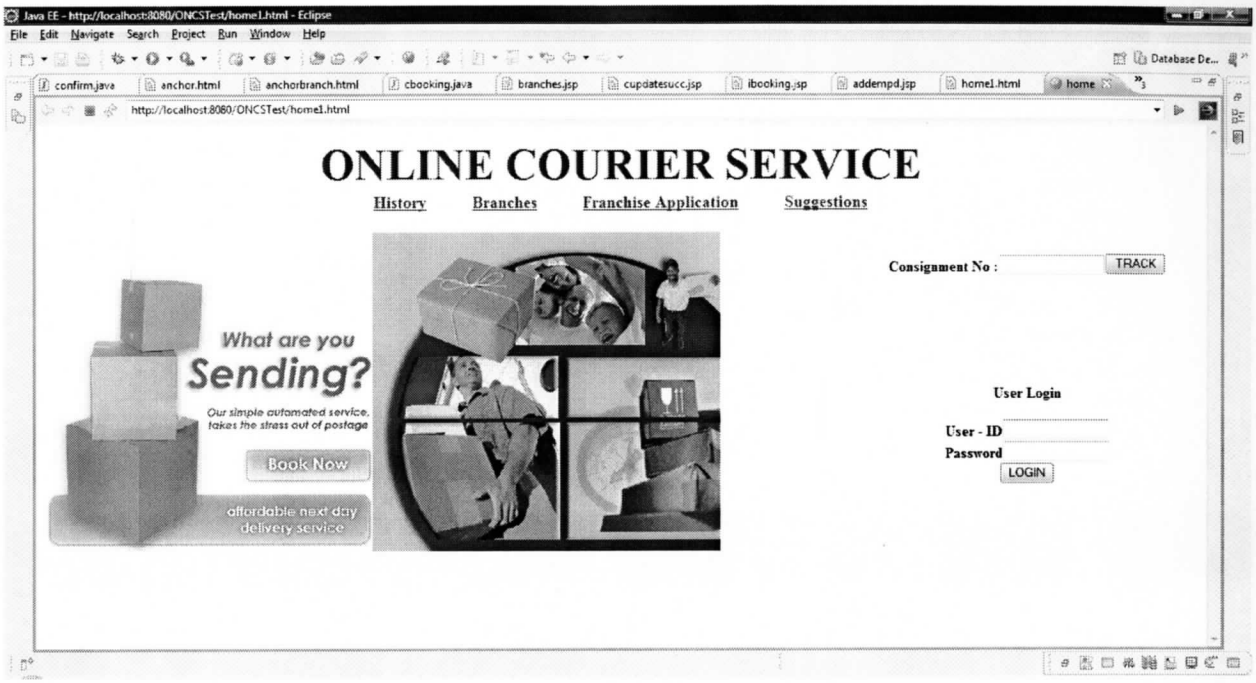
```
String bname1 = rs.getString(2);
        String bloc1 = rs.getString(4);
String badd1 = rs.getString(5);
System.out.println(badd1);
String cno1 = rs.getString(6);
        String fax1 = rs.getString(7);
String email1 = rs.getString(8);



if(bname!=bname1)
{
        st.executeUpdate("update branchreg set
branchname='"+bname+"' where branchcode='"+bcode+"'");
}

if(bloc!=bloc1)
{
        st.executeUpdate("update branchreg set
branchlocation='"+bloc+"' where branchcode='"+bcode+"'");
}

if(badd!=badd1)
{
        st.executeUpdate("update branchreg set
branchadderss='"+badd+"' where branchcode='"+bcode+"'");
}

if(cno!=cno1)
    {
```

```
                                        st.executeUpdate("update branchreg set
contactnumber='"+cno+"' where branchcode='"+bcode+"'");
                                    }

                                     if(fax!=fax1)
                                        {
                                        st.executeUpdate("update branchreg set
fax='"+fax+"' where branchcode='"+bcode+"'");
                                    }

                                    if(email!=email1)
                                    {
                                        st.executeUpdate("update branchreg set
email='"+email+"' where branchcode='"+bcode+"'");
                                    }

                                    }//IF CLOSED

                        res.sendRedirect("http://localhost:8080/ONCSTest/updatesucc.jsp");
                            }//WHILE CLOSED


            }//UPDATE CLOSED


      }//TRY CLOSED
       catch(Exception e)
      {
        e.printStackTrace();
       }
```

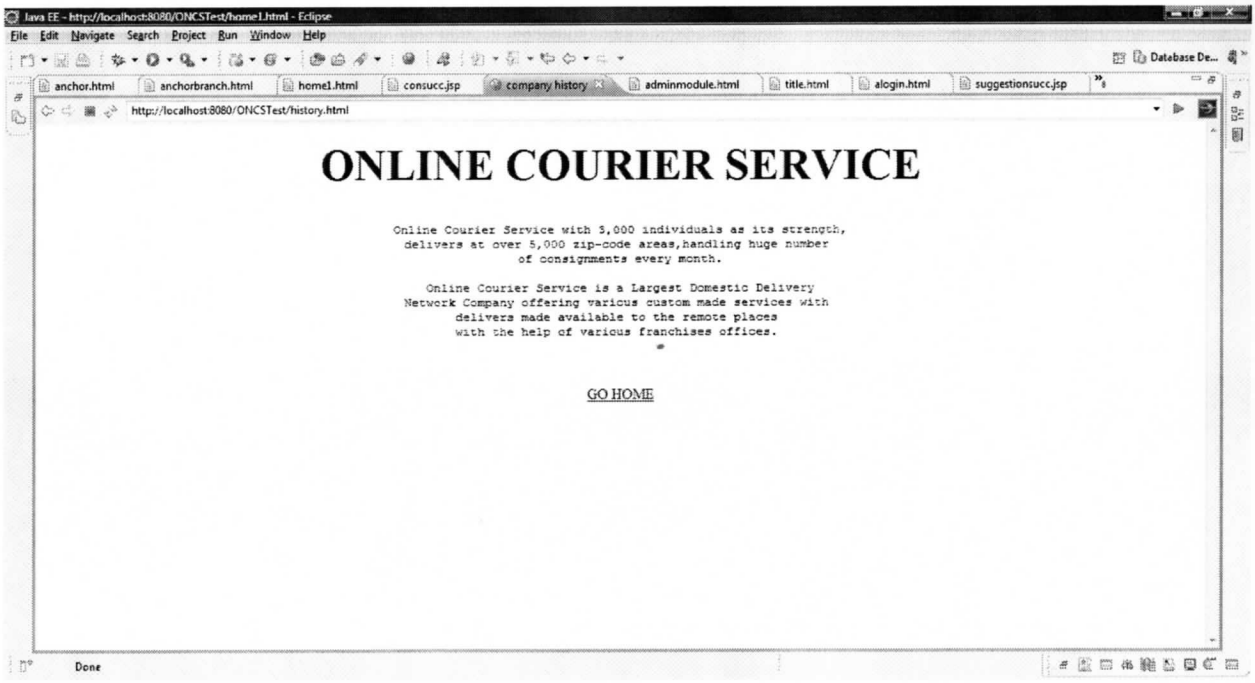
```
    }//PUBLIC CLASS CLOSED
}//MAIN CLOSED
```

## Project Sample Screen Shots:

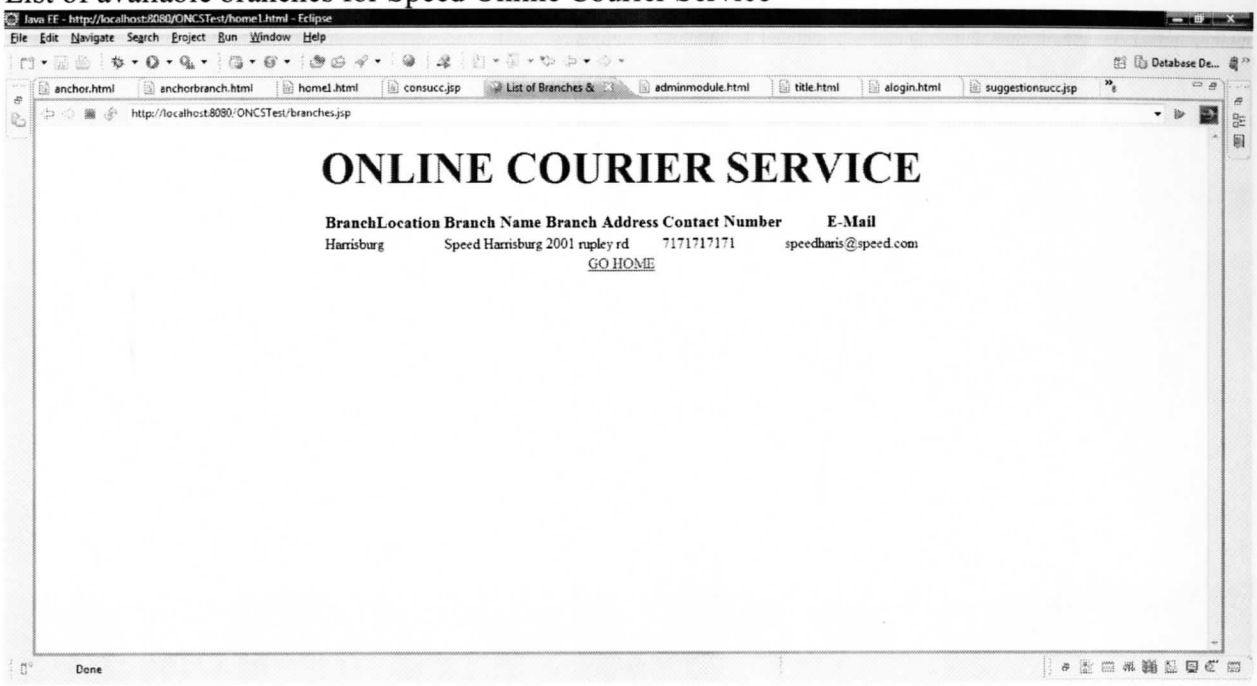
Home Page:



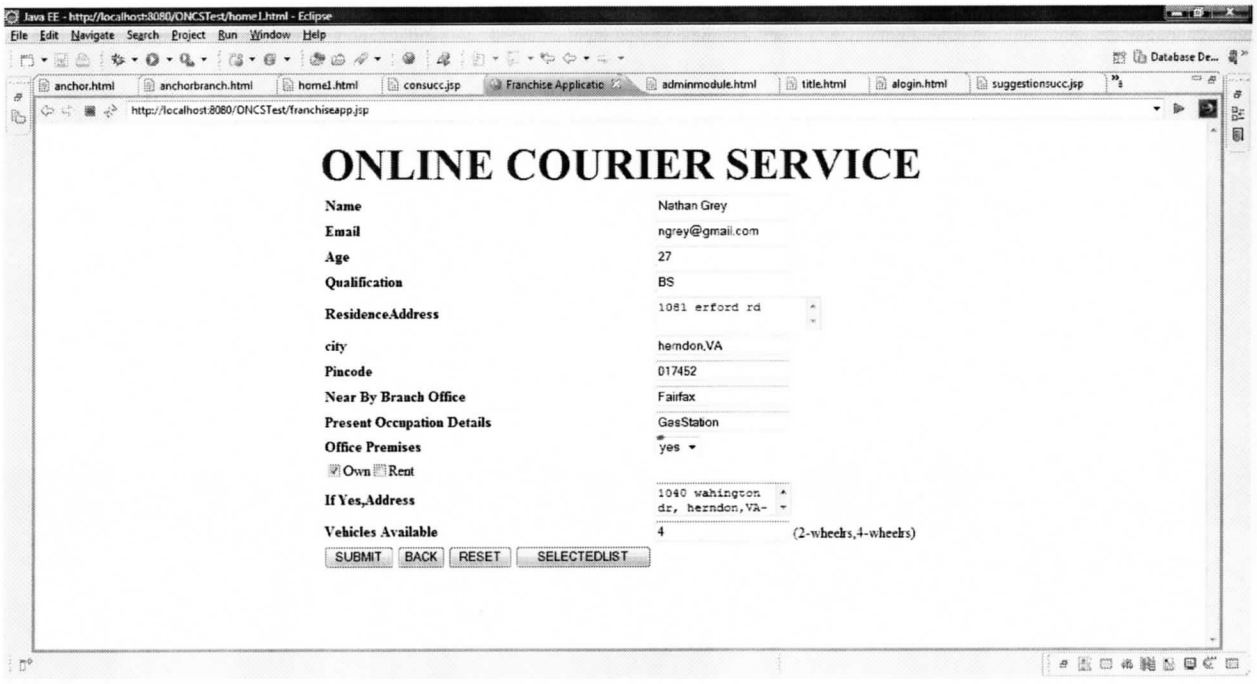

History Page of Speed courier Service



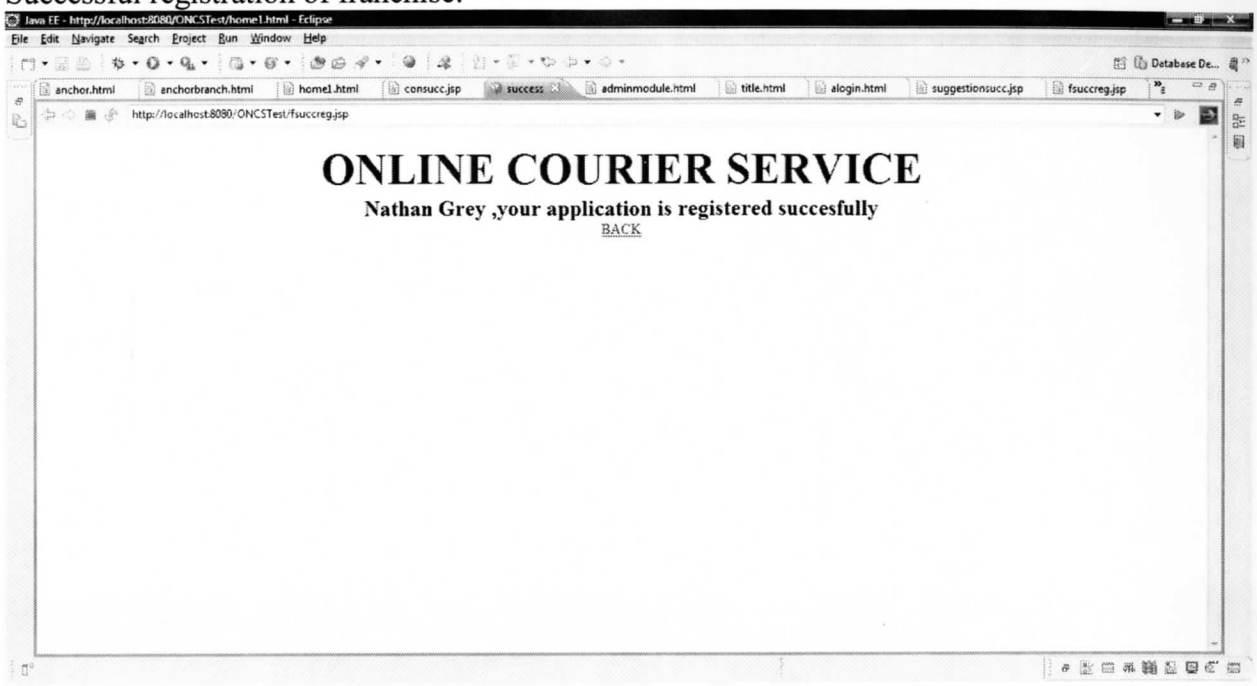
List of available branches for Speed Online Courier Service



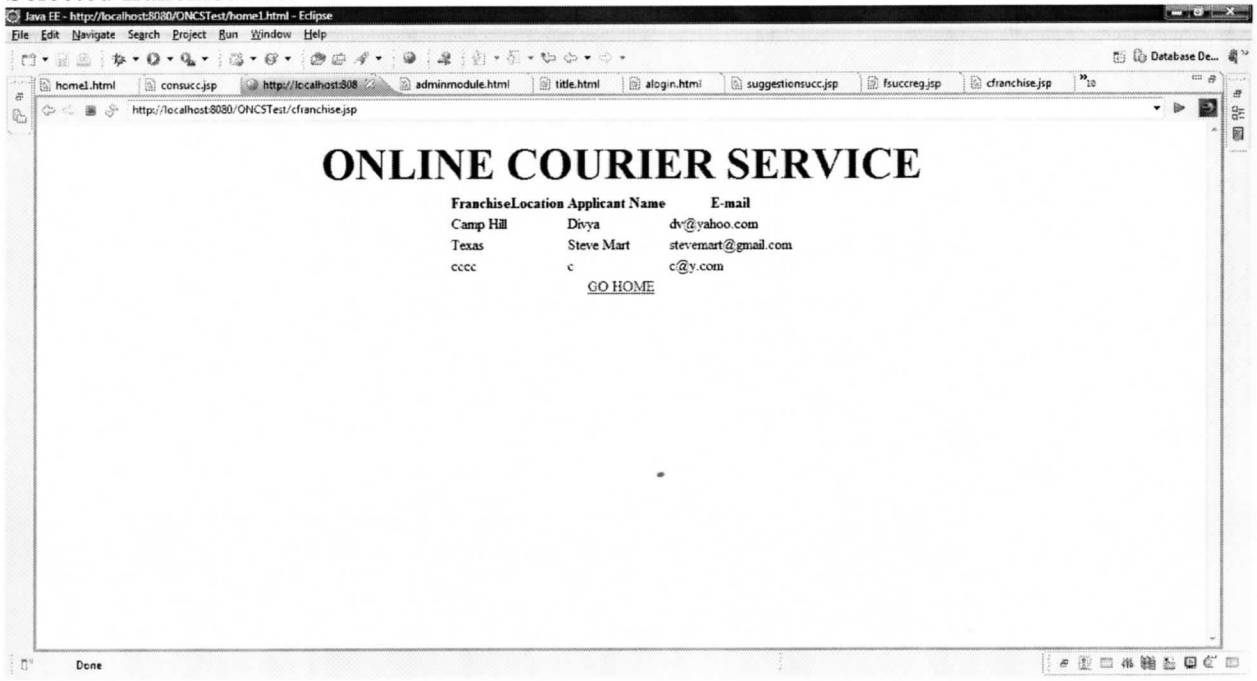

Franchise Application for people who are interested in opening a franchise



Successful registration of franchise:

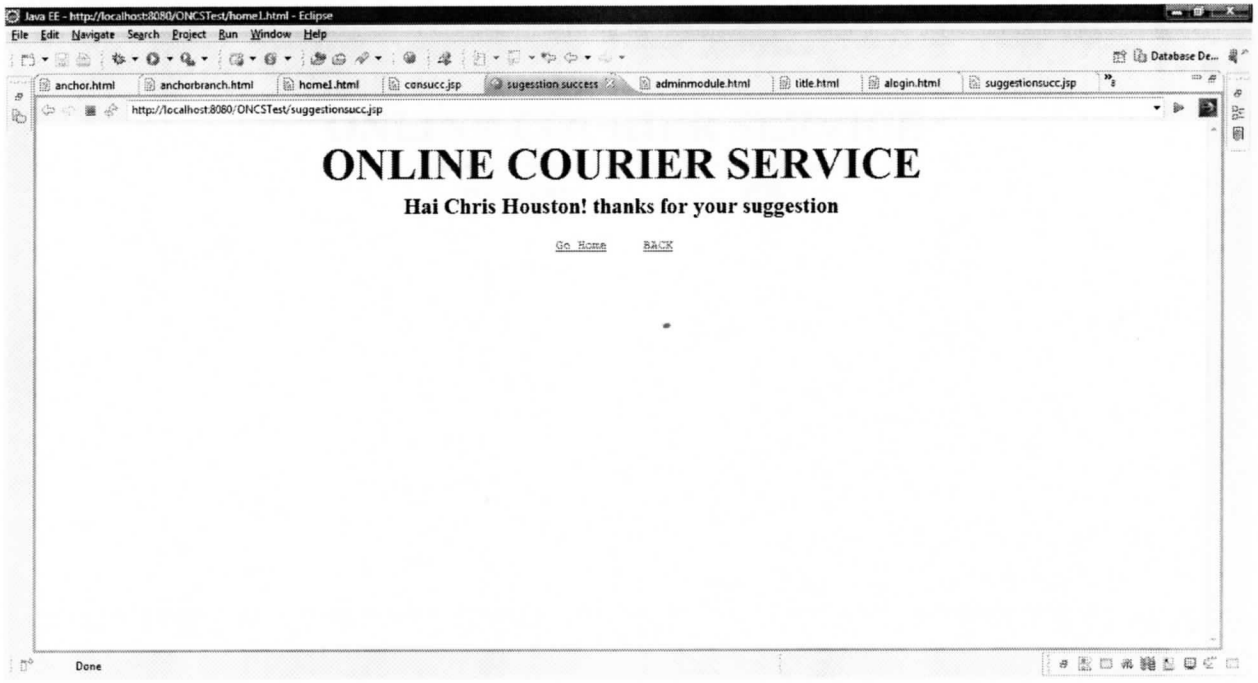



Selected franchise List



Suggestions Page:


Suggestion succesful submission page:



# APPENDIX B:

# SYSTEM TECHNICAL DOCUMENTATION

**UML:**

Unified Modeling language is a modeling language that is used for developing the system development models. UML provides 9 different diagrams that are used to describe a system that is being developed.

UseCase diagram:

UseCase diagram is a high level description of the system that is being developed. Usecase is a set of related functionalities that are grouped together. Actor is a person or a system that interacts with the usecase in-order to achieve some task or functionality.

Sequence Diagram:

Sequence diagram is sub category of interaction diagram. Sequence diagram represents timely ordered set of actions that are carried out sequentially in-order to achieve a task. Sequence diagram contains objects, time lines, messages and actors. Time line specifies the amount of time particular object exists. Messages are nothing but methods that are passed between the objects to complete a task.

Conceptual class diagram:

Conceptual class diagram is a system level description how a particular task is carried, what are the entities, methods and data associated with these tasks.

Domain model:

of database used drivers used varies. In this project online courier service backend database is MYSQL 5.1. So to connect to MYSQL 5.1 database from servlets classes JDBC feature is used, which uses com.mysql.jdbc.Driver driver for database connectivity.

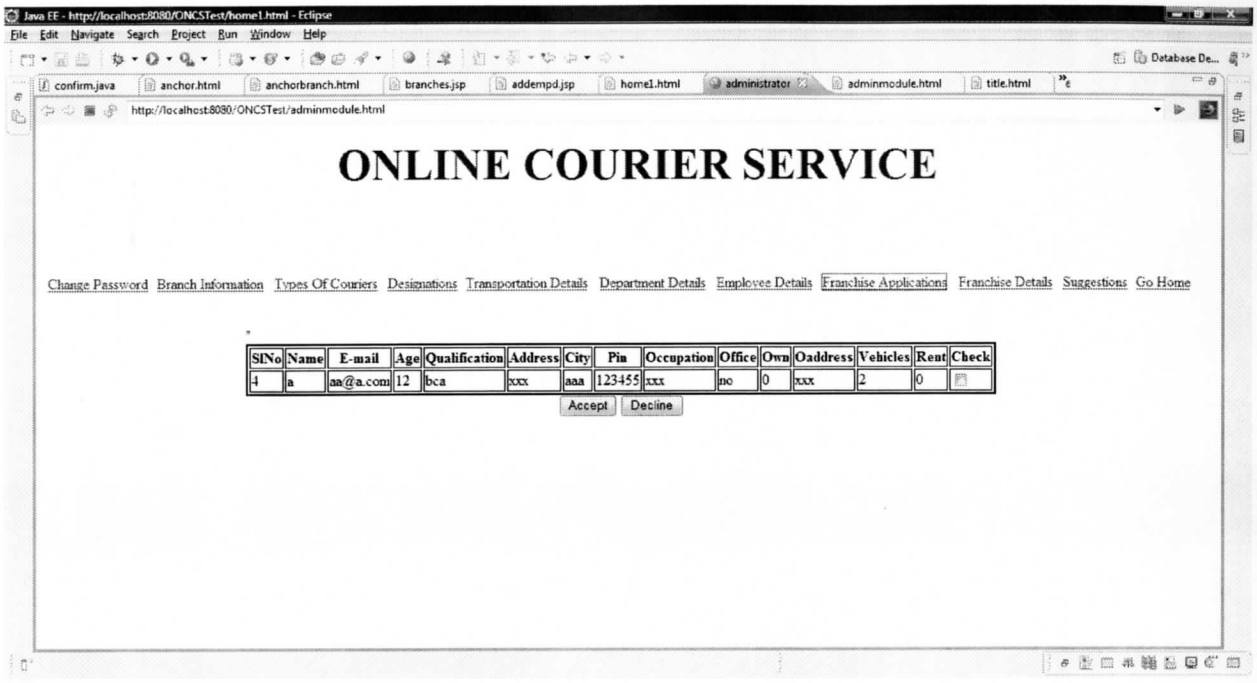
**Eclipse IDE:**

IDE is nothing but integrated development environment. With the help of an integrated development environment one can perform compilation, execution and debugging at the same time. Execution and code development can be done on same environment. It reduces lot of manual work associated such as setting up environment variables, managing configuration files etc. Eclipse is one among such different IDE's available today in market. Eclipse J2ee development IDE supports java desktop applications, enterprise applications and web applications as well.

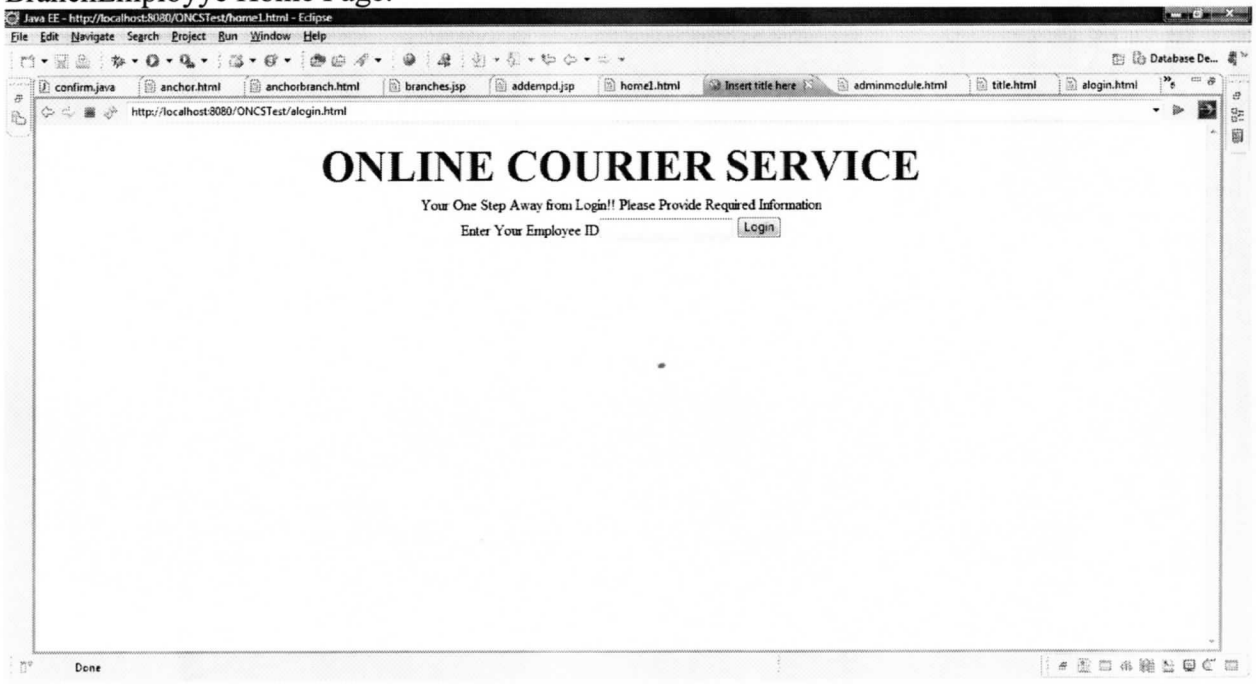
**HTML:**

Hypertext markup language is language that is used to display information on the browser. HTML contains various tags that help in displaying the date on the browser in a well formatted way.

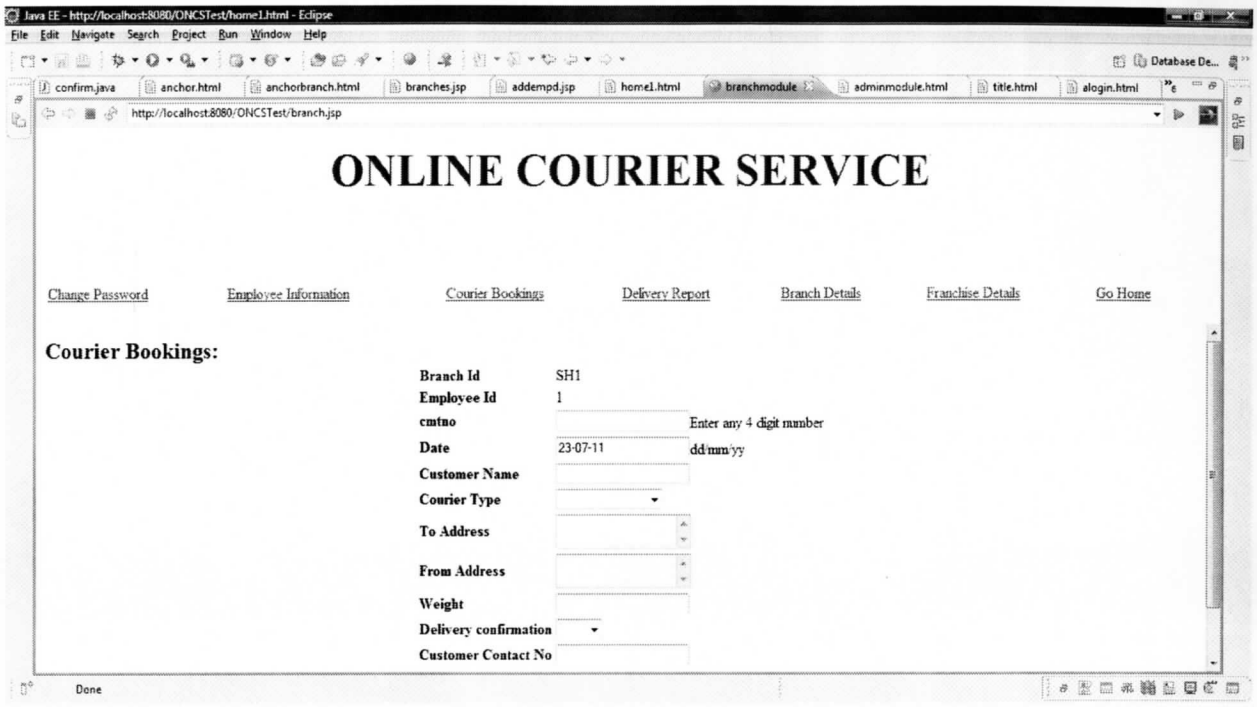
Admin home Page:




BranchEmployye Home Page:



Courier Booking Page of Employee at a Branch




Courier Tracking

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Conceptual class diagram:

Conceptual class diagram is a system level description how a particular task is carried, what are the entities, methods and data associated with these tasks.

Domain model:

Domain model is a high level representation of various entities, their methods and data along with relationship between each entities of a system that is being developed. Entities are nothing but classes.

**Java:**

Java is object oriented programming language with support for object oriented concepts like inheritance, encapsulation and polymorphism. Java supports inheritance concept through extends concept where a subclass can acquire or extend the properties of its super class. Java doesn't support multiple inheritance directly through extends key word but it supports inheritance through extends and implements keywords combination. Encapsulation is the process where data and code that operate on that date are bind together. Example for this is java encapsulates its data and methods that operate on the data through the concept called class.

J2EE is java enterprise edition which provides various functionalities to support web-based applications. Some of the J2ee supported concepts are Servlets, JSP,EJB,RMI etc.

Servlet is a java program that encapsulates senders request and sends it to the associated server for the response to the request. It also retrieves response from the server and redirects it back to the sender in the form of response. Servlets are used more for business logic.

JSP is a java component that allows a programmer to implement both business logic and presentation logic at a time.

JDBC is one J2EE service, which is a collection of java classes and interfaces. These classes and interfaces acts as medium to connect servlet classes to the backend database. Backend database can be anything like SQL server, MYSQL or ORACLE. Based on the type